

The following pages of *Bridge Design Aids*, Section 9, have been reviewed in May 1989 and found to be valid and appropriate for continued use:

| Page | Date | Title |
|------------------|----------|--|
| 9-1 | May 1962 | HS20-44 Loading |
| 9-10 | May 1962 | Simple Beam Shear One Lane |
| 9-10A | Apr 1979 | Simple Span Shear (Kips) - One Lane |
| 9-11 thru 9-16 | Apr 1963 | Bending Moments-Simple Beam |
| 9-20 thru 9-30 | May 1962 | Moments, Shears and Reactions for Continuous Spans, One Lane Live Load |
| 9-31 thru 9-36 | Aug 1962 | One Lane Live Load-Hinge at 1/5 Point |
| 9-37 thru 9-42 | Aug 1962 | One Lane Live Load-Hinge at 1/6 Point |
| 9-43-thru 9-48 | Aug 1962 | One Lane Live Load-Hinge at 1/7 Point |
| 9-49 thru 9-54 | Feb 1965 | One Lane Live Load-Hinge at 1/8 Point |
| 9-55 thru 9-60 | Aug 1967 | One Lane Live Load-Hinge at 1/9 Point |
| 9-61 thru 9-66 | Aug 1967 | One Lane Live Load-Hinge at 1/10 Point |
| 9-67 thru 9-72 | Aug 1967 | One Lane Live Load-Hinge at 1/11 Point |
| 9-73 thru 9-78 | Aug 1967 | One Lane Live Load-Hinge at 1/12 Point |
| 9-81 thru 9-81.5 | Mar 1986 | Table of Maximum Moments for Permit Load |
| 9-95 | Aug 1967 | Steam Railroad Loading E-10 |
| 9-96 | Aug 1967 | Steam Railroad Loading E-10 |

These pages will be updated from time-to-time when significant changes in the technology occur.



Philip C Warriner



Guy D. Mancarti

GDM:mkp

H20-S16(44) Loading

**TABLE OF MAXIMUM MOMENTS, SHEARS AND REACTIONS
SIMPLE SPANS, ONE LANE**

Spans in feet; moments in thousands of foot-pounds; shears and reactions in thousands of pounds.

These values are subject to specification reduction for loading of multiple lanes.

Impact is not included.

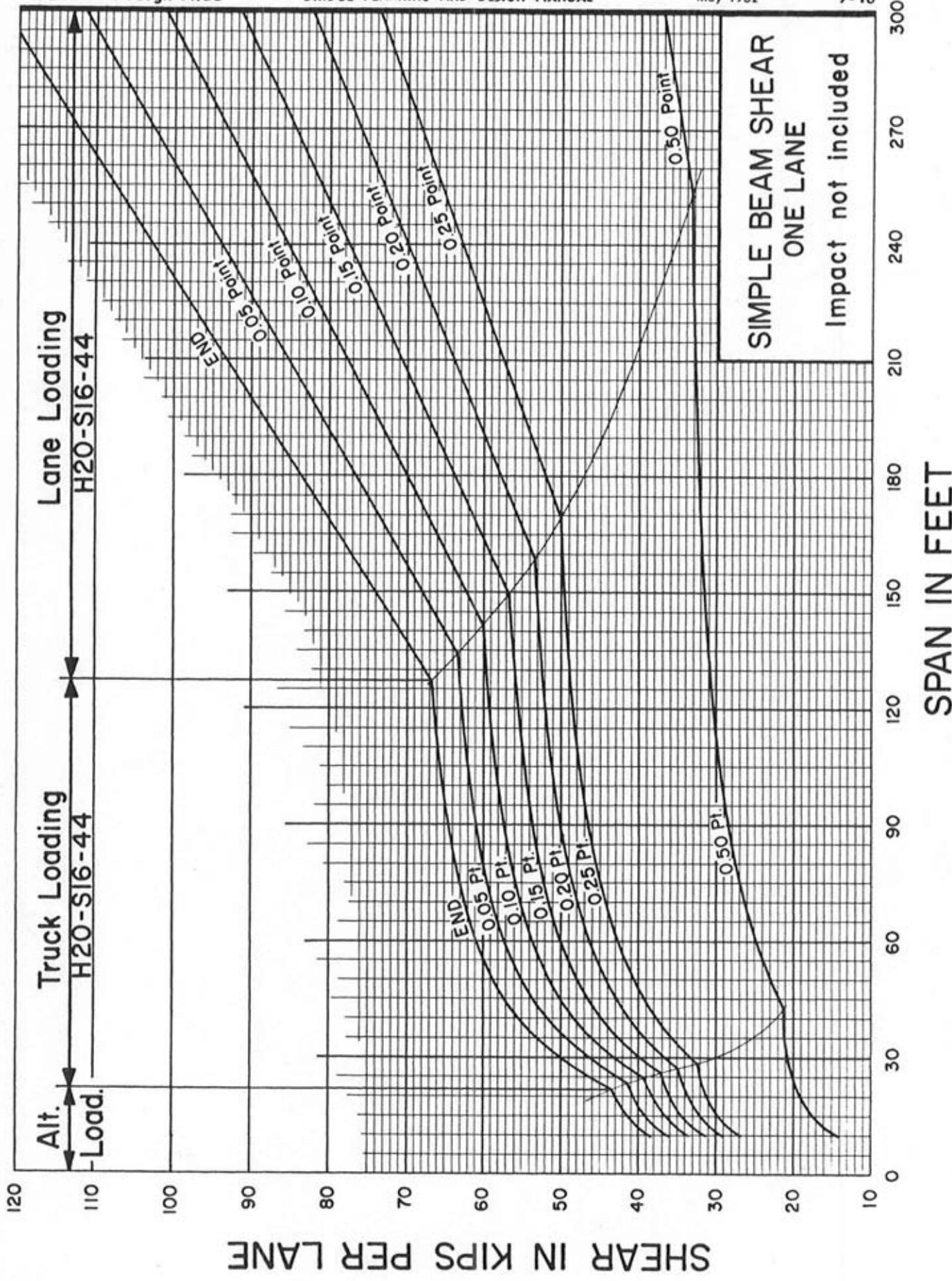
| Span | Moment | End Shear and End Reaction * | Span | Moment | End Shear and End Reaction * |
|------|--------------------|------------------------------|------|----------------------|------------------------------|
| 1 | 8.0 ^b | 32.0 ^b | 39 | 432.1 ^b | 54.8 ^b |
| 2 | 16.0 ^b | 32.0 ^b | 40 | 449.8 ^b | 55.2 ^b |
| 3 | 24.0 ^b | 32.0 ^b | 42 | 485.3 ^b | 56.0 ^b |
| 4 | 32.0 ^b | 32.0 ^b | 44 | 520.9 ^b | 56.7 ^b |
| 5 | 40.0 ^b | 32.0 ^b | 46 | 556.5 ^b | 57.3 ^b |
| 6 | 48.0 ^b | 32.0 ^b | 48 | 592.1 ^b | 58.0 ^b |
| 7 | 56.0 ^b | 34.3 ^a | 50 | 627.9 ^b | 58.5 ^b |
| 8 | 64.0 ^b | 36.0 ^a | 52 | 663.6 ^b | 59.1 ^b |
| 9 | 72.0 ^b | 37.3 ^a | 54 | 699.3 ^b | 59.6 ^b |
| 10 | 80.0 ^b | 38.4 ^a | 56 | 735.1 ^b | 60.0 ^b |
| 11 | 88.4 ^a | 39.3 ^a | 58 | 770.8 ^b | 60.4 ^b |
| 12 | 100.0 ^a | 40.0 ^a | 60 | 806.5 ^b | 60.8 ^b |
| 13 | 111.7 ^a | 40.6 ^a | 62 | 842.4 ^b | 61.2 ^b |
| 14 | 123.4 ^a | 41.1 ^a | 64 | 878.1 ^b | 61.5 ^b |
| 15 | 135.2 ^a | 41.6 ^a | 66 | 914.0 ^b | 61.9 ^b |
| 16 | 147.0 ^a | 42.0 ^a | 68 | 949.7 ^b | 62.1 ^b |
| 17 | 158.8 ^a | 42.4 ^a | 70 | 985.6 ^b | 62.4 ^b |
| 18 | 170.7 ^a | 42.7 ^a | 75 | 1,075.1 ^b | 63.1 ^b |
| 19 | 182.5 ^a | 42.9 ^a | 80 | 1,164.0 ^b | 63.6 ^b |
| 20 | 194.4 ^a | 43.2 ^a | 85 | 1,254.7 ^b | 64.1 ^b |
| 21 | 206.3 ^a | 43.4 ^a | 90 | 1,344.4 ^b | 64.5 ^b |
| 22 | 218.2 ^a | 43.6 ^a | 95 | 1,433.2 ^b | 64.9 ^b |
| 23 | 230.1 ^a | 44.5 ^a | 100 | 1,524.0 ^b | 65.3 ^b |
| 24 | 242.0 ^a | 45.3 ^a | 110 | 1,703.6 ^b | 65.9 ^b |
| 25 | 253.9 ^a | 46.1 ^a | 120 | 1,883.3 ^b | 66.4 ^b |
| 26 | 265.8 ^a | 46.8 ^a | 130 | 2,063.1 ^b | 67.6 |
| 27 | 277.8 ^a | 47.4 ^a | 140 | 2,242.8 ^b | 70.8 |
| 28 | 289.7 ^a | 48.0 ^a | 150 | 2,475.1 | 74.0 |
| 29 | 301.7 ^a | 48.8 ^a | 160 | 2,768.0 | 77.2 |
| 30 | 313.6 ^a | 49.6 ^a | 170 | 3,077.1 | 80.4 |
| 31 | 325.5 ^a | 50.3 ^a | 180 | 3,402.0 | 83.6 |
| 32 | 337.5 ^a | 51.0 ^a | 190 | 3,743.1 | 86.8 |
| 33 | 349.5 ^a | 51.6 ^a | 200 | 4,100.0 | 90.0 |
| 34 | 361.4 ^a | 52.2 ^a | 220 | 4,862.0 | 96.4 |
| 35 | 373.4 ^a | 52.8 ^a | 240 | 5,688.0 | 102.8 |
| 36 | 385.3 ^a | 53.3 ^a | 260 | 6,578.0 | 109.2 |
| 37 | 397.3 ^a | 53.8 ^a | 280 | 7,532.0 | 115.6 |
| 38 | 414.3 ^b | 54.3 ^b | 300 | 8,550.0 | 122.0 |

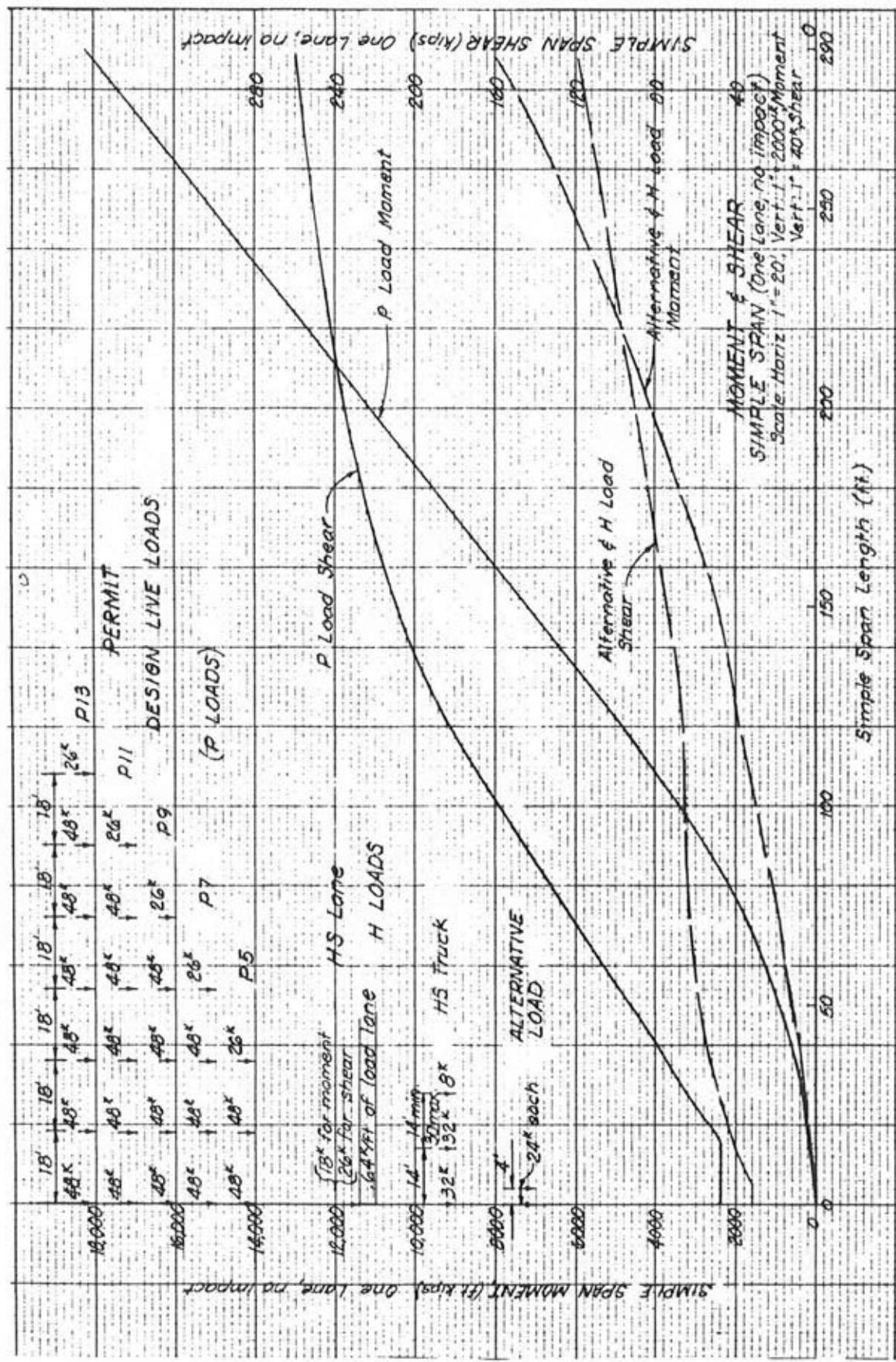
* The concentrated load is considered placed at the support. Loads used are those stipulated for shear.

^b Maximum value determined by Standard Truck Loading (one H-S truck).

^a Maximum value determined by Special Loading (24,000 lb. dual axles spaced 4'-0" c. to c.).

Unless otherwise indicated, the maximum values are determined by the Standard Lane Loading.





BENDING MOMENTS IN BEAMS DUE TO A UNIFORM LOAD OF 1 KIP PER FT.

| SPAN | WL ² | SIMPLE BEAM MOMENT AT GIVEN POINT | | | | | |
|------|-----------------|-----------------------------------|--------------------|---------|---------|----|--------|
| | | .1 & .9 | .2 & .8 | .3 & .7 | .4 & .6 | .5 | F.E.M. |
| | | ONE END FIXED | BOTH ENDS FIXED | | | | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 66 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 67 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 68 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 69 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 70 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 71 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 72 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 75 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 76 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 77 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 78 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 79 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 80 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 81 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 82 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 83 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 84 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 85 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 86 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 87 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 88 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 89 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 90 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 91 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 92 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 93 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 94 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 95 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 96 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 97 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 98 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 99 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 100 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 101 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 102 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 103 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 104 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 105 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 106 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 107 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 108 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 109 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 110 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 111 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 112 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 113 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 114 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 115 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 116 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 117 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 118 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 119 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 120 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 121 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 122 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 123 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 124 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 125 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 126 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 127 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 128 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 129 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 130 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 131 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 132 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 133 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 134 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 135 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 136 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 137 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 138 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 139 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 140 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 141 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 142 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 143 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 144 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 145 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 146 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 147 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 148 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 149 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 150 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 151 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 152 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 153 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 154 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 155 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 156 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 157 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 158 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 159 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 160 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 161 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 162 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 163 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 164 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 165 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 166 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 167 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 168 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 169 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 170 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 171 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 172 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 173 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 174 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 175 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 176 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 177 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 178 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 179 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 180 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 181 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 182 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 183 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 184 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 185 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 186 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 187 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 188 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 189 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 190 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 191 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 192 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 193 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 194 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 195 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 196 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 197 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 198 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 199 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

BENDING MOMENTS IN BEAMS DUE TO A UNIFORM LOAD OF 1 KIP PER FT.

BENDING MOMENTS IN BEAMS DUE TO A UNIFORM LOAD OF 1 KIP PER FT.

BENDING MOMENTS IN BEAMS DUE TO A UNIFORM LOAD OF 1 KIP PER FT.

BENDING MOMENTS IN BEAMS DUE TO A UNIFORM LOAD OF 1 KIP PER FT.

BENDING MOMENTS IN BEAMS DUE TO A UNIFORM LOAD OF 1 KIP PER FT.

| SPAN | WL ² | SIMPLE BEAM MOMENT AT GIVEN POINT | | | | | | F.E.M. |
|------|-----------------|-----------------------------------|---------|---------|---------|-------|-------|--------|
| | | .1 & .9 | .2 & .8 | .3 & .7 | .4 & .6 | .5 | .5 | |
| 190 | 0 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 191 | 1 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 192 | 2 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 193 | 3 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 194 | 4 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 195 | 5 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 196 | 6 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 197 | 7 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 198 | 8 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 199 | 9 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |
| 200 | 0 | 36100 | 36481 | 36864 | 37249 | 37636 | 38025 | 38416 |

**Moments, Shears, and Reactions for Continuous Spans
Live Loading H20-S16-44**

(a) General

The following live load tables may be used for most designs. The left side of the table lists maximum simple beam moments and fixed end moments that result from the loading that produces that simple beam moment. The right side of the table lists maximum fixed end moments and the simple beam moments that result from the loading that produces that fixed end moment. The center of the table lists maximum shears and reactions. Accuracy is within 2% for members with uniform or nearly uniform moment of inertia.

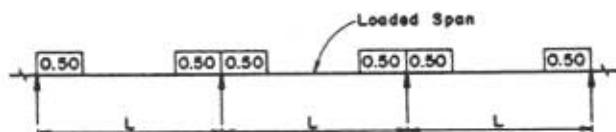
For extremely unbalanced spans or for spans adjacent to hinges. The designer will have to determine the loading which will produce maximum moments.

The values for moments, shears, and reactions are for one lane of H20-S16-44 loading without impact. Either alternative loading or lane loading has been used where these loadings produce more critical stresses than the Standard H-S Truck.

The following discussion summarizes the assumptions and decisions made in the development of these live load tables.

(b) Moment at Midspan

To obtain the maximum positive moment at midspan, the span was loaded to obtain the maximum SBM. Although the assumption that the maximum SBM occurs at midspan is not strictly correct except where only one axle of the truck is on the span or where the lane loading is used, the error introduced is considered to be insignificant. The decision to change loading was made on the basis of the positive moment after the FEM's were distributed, assuming distribution factors of 0.50 at the joints. The figure used in this calculation is shown below.



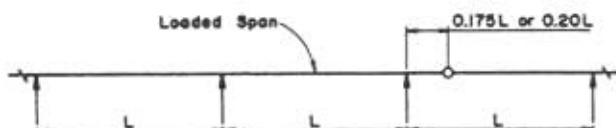
The spans on which the loadings are changed in this section of the table will not be the same as the spans shown in the table on page 4D.2.7-1 because the table shown on page 4D.2.7-1 is for simply supported spans.

When the adjacent spans are between 0.75 L and 1.33 L in length, assuming the loaded span to be of "L" length, the maximum resulting error in positive moment at midspan is 1.35%.

There is no significant error if an adjacent span is "L" in length and has a hinge located between 0.175 L and 0.20 L from the far end of the span being designed.

For the case where the hinge is located between 0.175 L and 0.20 L from the near end, adjacent to the loaded span, the maximum error is slightly less than 5%. Since this maximum error occurs at a span of 14' it is recommended it be ignored.

For your information, the tabulation below shows the limits for each loading for this particular case.

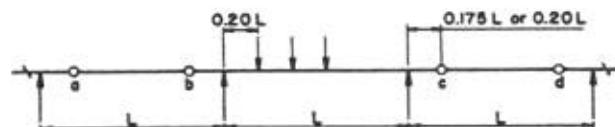


| Loading | Span in feet |
|-------------|--------------|
| Truck | 1 to 12 |
| Alternative | 13 to 39 |
| Truck | 40 to 155 |
| Lane | 156 on up |

(c) Moments for 0.2 or 0.8 points

Since the LL positive envelop curve is not an exact parabola, the SBM's and the FEM's are given for the loadings at the 0.2 point of a span fixed at both ends. The change in type of loading was determined on the basis of the positive moment at the 0.2 point after the FEM's were distributed, assuming distribution factors of 0.50 at the joints.

If the adjacent spans are between 0.75 L and 1.33 L in length, assuming the loaded span to be of "L" length, the values in the table may be used up to a span length of 225' with a maximum error of 5%. Beyond a span length of 225' the designer should determine whether the Truck or the Lane Loading is the critical loading if the adjacent spans are not the same length as the loaded span.



When one of the adjacent spans has a hinge located 0.175 L or 0.20 L from the far end, locations "a" and "d" in the figure above, the table values may be used without any error. For the hinge located at "c", the maximum error is 1%. In case the hinge is placed at "b", the tabulation shown below is to be used to determine whether a loading different from that in the table should be used for a particular span length.

| Loading | Span in feet |
|-------------|--------------|
| Truck | 1 to 9 |
| Alternative | 10 to 32 |
| Truck | 33 to 168 |
| Lane | 169 on up |

(d) Spans Simply Supported at One End

The FEM's and the SBM's for spans simply supported at one end have been given at the 0.2, 0.4, 0.6, and 0.8 points of the span. The change in loading was made on the basis of the positive moment at the point under consideration, assuming that the distributed LL moment at the first interior support is equal to 46.42 percent of the FEM. This percentage is based on distribution factors of 0.50 at the joints, the end span being $\frac{1}{4}$ the length of the interior spans.

No significant error, 1% or less, is introduced even if the end span is the same length as the interior spans except for the loadings at the 0.8 point where the error may be as high as 10%. Therefore, when the end span is approximately the same length as the interior span, it may be necessary for the designer to use a loading other than that shown in the table for the 0.8 point. To help in determining when this is the case, the tabulation below shows the limits of each loading for the case where the end span and interior spans are of length "L".

| Loading | Span in feet |
|-------------|--------------|
| Truck | 1 to 17 |
| Alternative | 18 to 59 |
| Truck | 60 to 262 |
| Lane | 263 on up |

If the end span is one-half the length of the interior spans, a maximum error of 1% may result except for the loadings at the 0.8 point where the error may be as high as 9%. To help in determining whether another loading should be used for the 0.8 point when the end span is approximately one-half the length of the interior spans, the tabulation below shows the limits for each loading when the end span length is one-half "L".

| Loading | Span in feet |
|-------------|--------------|
| Truck | 1 to 11 |
| Alternative | 12 to 37 |
| Truck | 38 to 190 |
| Lane | 191 on up |

(e) Maximum Shears and Reactions

To help in plotting the shear diagram, the LL shear at midspan is given. The designer should note that the LL values given in this table may have to be increased for moment shear.

(f) Negative Moments

In calculating the FEM's for the negative moments, the loadings were placed so as to obtain a maximum FEM at joint B. The assumption that the maximum final distributed moment will result from the maximum FEM @ B is in error in the order of 0.3% for a span continuous at both ends.

To calculate the maximum negative moment at a joint, the Lane Loading is usually the governing loading except for spans 45 feet or less in length where the Truck Loading with its 32 kips axles variably spaced from 14 feet to 30 feet inclusive may govern. A separate table will be issued to handle this case.

For very short spans adjacent to relatively long spans, the Truck Loading placed in the long span may give higher negative moment at the joint under consideration than if the Lane Loading was placed on both the short and long spans. Therefore, the SBM's, FEM's, and location of the rear axle of the Truck have been given for this case up to 125 feet for the span simply supported at one end and 144 feet for the span fixed at both ends. Beyond these span lengths, the Lane Loading will give a higher FEM @ B.

Where the Truck Loading is used to obtain the maximum longitudinal moment for the design of columns, the simple beam reaction at the bent may be obtained by dividing the "SBM" by "aL".

(g) Spans with Hinge Points

Tables for One Lane Live Load for span in which a hinge occurs at 1/5, 1/6, 1/7, 1/8, 1/9, 1/10, 1/11 and 1/12 points are also included.

ONE LANE LIVE LOAD (H20-516-44)

(Impact not included)

POSITIVE MOMENTS (kip feet)

| IMPACT IN FT. | SPAN IN FT. | LOADING | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | | | | | | | | |
|---------------|-------------|--------------|----------------|------------|-------------|-----------------|------------|-------------|------------|------------|-------------|------------|-------------|--------------------------------------|-------------|------------|----------------|------------------------------|----------------|------------|--------------|--------------------------------------|--------------|------------|--------------|------------------------------|--------------|------------|--------------|------------|--------------|------------|----|
| | | TRUCK (T) | | | | ALTERNATIVE (A) | | | | LANE (L) | | | | SIMPLE SPAN SHEARS & REACTIONS (S&R) | | | | CENTRAL REACTION SPANS (C&R) | | | | SIMPLE SPAN SHEARS & REACTIONS (S&R) | | | | CENTRAL REACTION SPANS (C&R) | | | | | | | |
| IMPACT IN FT. | SPAN IN FT. | SBM @ CTR | FEM @ B + C | FEM @ B | SBM @ 2L | FEM @ B | FEM @ B | SBM @ 2L | FEM @ B | FEM @ B | SBM @ 4L | FEM @ B | SBM @ 6L | FEM @ B | SBM @ 8L | FEM @ B | SBM @ 6.42L | FEM @ B | SBM @ 9.33L | FEM @ B | SBM @ 12L | FEM @ B | SBM @ 16L | FEM @ B | SBM @ 20L | FEM @ B | SBM @ 24L | FEM @ B | SBM @ 32L | FEM @ B | SBM @ 48L | FEM @ B | |
| 1 | 300 | 8.07 | 4.0 | 4.0 | 5.17 | 4.1 | 2.0 | 10.2 | 6.1 | 15.4 | 12.3 | 10.2 | 9.2 | 23.0 | 18.4 | 32.0 | 16.0 | 32.0 | 19.1 | 7.2 | 6.8 | 12.3 | 2.9 | 0.7 | 14.2 | 9.5 | 4.7 | 2.4 | 1 | | | | |
| 2 | 300 | 16.0 | 8.0 | 8.0 | 10.2 | 8.2 | 2.0 | 10.2 | 6.1 | 15.4 | 12.3 | 10.2 | 9.2 | 23.0 | 18.4 | 32.0 | 16.0 | 32.0 | 19.1 | 7.2 | 6.8 | 12.3 | 2.9 | 0.7 | 14.2 | 9.5 | 4.7 | 2.4 | 2 | | | | |
| 3 | 300 | 24.0 | 12.0 | 12.0 | 15.4 | 12.3 | 3.1 | 15.4 | 9.2 | 23.0 | 18.4 | 15.4 | 13.8 | 32.0 | 18.8 | 32.0 | 16.0 | 32.0 | 19.1 | 7.2 | 6.8 | 12.3 | 2.9 | 0.7 | 14.2 | 9.5 | 4.7 | 2.4 | 3 | | | | |
| 4 | 300 | 32.0 | 16.0 | 16.0 | 20.5 | 16.4 | 4.1 | 20.6 | 12.3 | 30.7 | 21.5 | 20.6 | 18.4 | 32.0 | 18.4 | 32.0 | 16.0 | 32.0 | 19.1 | 7.2 | 6.8 | 12.3 | 2.9 | 0.7 | 14.2 | 9.5 | 4.7 | 2.4 | 4 | | | | |
| 5 | 300 | 40.0 | 20.0 | 20.0 | 25.6 | 20.5 | 5.1 | 25.6 | 15.4 | 38.4 | 26.9 | 38.4 | 30.7 | 25.6 | 23.0 | 32.0 | 16.0 | 32.0 | 23.0 | 12.3 | 2.1 | 39.1 | 30.8 | 21.8 | 14.7 | 8.0 | 1.7 | 35.6 | 23.7 | 11.9 | 5 | | |
| 6 | 300 | 48.0 | 24.0 | 24.0 | 30.7 | 24.6 | 6.1 | 30.7 | 16.4 | 46.1 | 32.3 | 46.1 | 30.7 | 37.6 | 32.0 | 32.0 | 16.0 | 32.0 | 29.2 | 23.7 | 2.6 | 46.9 | 37.0 | 26.6 | 17.9 | 9.9 | 2.0 | 42.7 | 28.4 | 14.2 | 6 | | |
| 7 | 300 | 56.0 | 28.0 | 28.0 | 35.8 | 28.7 | 7.2 | 35.8 | 21.5 | 53.0 | 37.6 | 53.0 | 35.8 | 32.3 | 34.3 | 16.0 | 34.3 | 34.6 | 28.2 | 3.0 | 54.7 | 43.1 | 31.5 | 21.3 | 11.9 | 2.3 | 49.8 | 33.2 | 16.6 | 7 | | | |
| 8 | 300 | 64.0 | 32.0 | 32.0 | 41.0 | 32.8 | 8.2 | 41.0 | 24.6 | 61.4 | 43.0 | 61.4 | 49.2 | 41.0 | 36.0 | 16.0 | 36.0 | 40.1 | 32.8 | 1.8 | 45.9 | 54.1 | 36.6 | 24.7 | 14.1 | 2.7 | 56.9 | 37.9 | 19.0 | 8 | | | |
| 9 | 300 | 72.0 | 36.0 | 36.0 | 46.1 | 36.9 | 9.2 | 46.1 | 24.6 | 61.4 | 49.4 | 61.4 | 55.3 | 46.1 | 41.5 | 27.3 | 16.0 | 37.3 | 45.9 | 37.7 | 2.2 | 56.4 | 65.4 | 41.6 | 28.3 | 16.3 | 1.8 | 49.3 | 45.3 | 36.5 | 9 | | |
| 10 | 300 | 80.0 | 40.0 | 40.0 | 51.2 | 41.0 | 10.2 | 57.6 | 69.1 | 76.0 | 53.8 | 76.0 | 69.1 | 76.0 | 57.6 | 46.1 | 46.1 | 38.4 | 16.0 | 36.4 | 51.7 | 42.6 | 2.6 | 67.2 | 76.3 | 47.1 | 32.0 | 18.7 | 2.0 | 57.6 | 53.8 | 43.2 | 10 |
| 11 | 300 | 88.0 | 44.0 | 44.0 | 56.3 | 45.1 | 11.3 | 65.3 | 76.1 | 84.5 | 57.9 | 84.5 | 60.1 | 56.3 | 50.7 | 39.3 | 16.0 | 39.3 | 57.6 | 47.8 | 3.0 | 76.2 | 86.9 | 52.6 | 35.8 | 21.1 | 2.3 | 66.5 | 62.1 | 48.7 | 11 | | |
| 12 | 300 | 96.0 | 48.0 | 48.0 | 61.4 | 49.2 | 12.3 | 73.0 | 82.6 | 99.8 | 97.2 | 99.8 | 91.0 | 61.4 | 55.3 | 40.0 | 16.0 | 40.0 | 64.0 | 53.1 | 3.4 | 89.3 | 97.3 | 59.2 | 39.7 | 23.7 | 2.5 | 75.7 | 70.4 | 48.0 | 12 | | |
| 13 | 300 | 104.0 | 52.0 | 52.0 | 66.6 | 53.2 | 13.3 | 80.6 | 88.7 | 111.4 | 107.5 | 111.4 | 101.6 | 66.6 | 59.9 | 40.6 | 16.6 | 40.6 | 70.3 | 56.6 | 3.6 | 100.6 | 107.5 | 64.0 | 43.7 | 26.3 | 2.8 | 85.2 | 78.5 | 52.3 | 13 | | |
| 14 | 300 | 112.0 | 56.0 | 56.0 | 71.7 | 57.3 | 14.3 | 88.3 | 94.6 | 122.9 | 117.5 | 122.9 | 112.1 | 71.7 | 77 | 64.5 | 41.1 | 17.1 | 41.1 | 76.8 | 64.2 | 4.2 | 111.9 | 117.6 | 69.9 | 47.8 | 29.1 | 3.1 | 94.8 | 86.5 | 55.6 | 14 | |
| 15 | 300 | 120.2 | 72.0 | 91.2 | 76.8 | 61.4 | 15.4 | 96.0 | 100.3 | 134.4 | 127.1 | 134.4 | 122.6 | 96.0 | 120.5 | 41.6 | 17.6 | 41.6 | 83.5 | 70.0 | 4.6 | 123.3 | 127.6 | 76.0 | 52.0 | 32.0 | 3.4 | 104.8 | 94.4 | 56.9 | 15 | | |
| 16 | 300 | 147.0 | 76.9 | 98.1 | 81.9 | 63.5 | 16.4 | 103.7 | 105.6 | 145.9 | 136.6 | 145.9 | 132.7 | 103.7 | 129.0 | 42.0 | 18.0 | 42.0 | 90.3 | 75.7 | 5.0 | 134.8 | 137.5 | 82.2 | 55.3 | 35.0 | 3.7 | 114.8 | 102.2 | 62.2 | 16 | | |
| 17 | 300 | 156.8 | 95.1 | 104.6 | 87.0 | 69.6 | 17.4 | 111.4 | 111.1 | 157.4 | 145.8 | 157.4 | 142.6 | 111.4 | 137.2 | 42.4 | 18.4 | 42.4 | 97.3 | 82.0 | 5.4 | 146.3 | 147.4 | 88.6 | 60.7 | 38.1 | 4.0 | 124.9 | 110.0 | 65.8 | 17 | | |
| 18 | 300 | 170.7 | 91.3 | 111.4 | 119.0 | 116.2 | 56.3 | 119.0 | 116.4 | 169.0 | 154.9 | 169.0 | 152.9 | 119.0 | 145.3 | 42.7 | 18.7 | 42.7 | 104.4 | 88.3 | 5.8 | 157.6 | 157.1 | 95.0 | 65.3 | 41.3 | 4.3 | 135.0 | 117.6 | 65.9 | 18 | | |
| 19 | 300 | 182.5 | 97.4 | 118.0 | 126.7 | 121.4 | 59.9 | 126.7 | 121.6 | 180.5 | 163.9 | 180.5 | 162.9 | 126.7 | 159.4 | 42.9 | 18.9 | 42.9 | 111.7 | 94.7 | 6.2 | 169.3 | 166.6 | 101.7 | 69.9 | 44.6 | 4.7 | 145.2 | 125.3 | 75.2 | 19 | | |
| 20 | 300 | 194.4 | 103.6 | 124.4 | 124.4 | 126.6 | 61.4 | 124.4 | 126.7 | 192.0 | 172.8 | 192.0 | 172.8 | 124.4 | 134.4 | 43.2 | 19.2 | 44.0 | 119.1 | 101.3 | 6.6 | 180.9 | 176.5 | 105.4 | 74.7 | 48.0 | 5.0 | 155.5 | 132.6 | 75.6 | 20 | | |
| 21 | 300 | 206.3 | 109.7 | 150.9 | 142.1 | 137.6 | 63.0 | 142.1 | 131.8 | 203.5 | 181.6 | 203.5 | 187.7 | 142.1 | 169.1 | 43.4 | 19.4 | 43.4 | 186.1 | 155.4 | 7.0 | 192.5 | 186.1 | 115.4 | 79.5 | 5.3 | 165.8 | 140.4 | 79.0 | 21 | | | |
| 22 | 300 | 218.2 | 115.6 | 137.3 | 149.6 | 144.6 | 64.5 | 149.6 | 136.6 | 215.0 | 190.3 | 215.0 | 192.5 | 149.6 | 176.9 | 43.6 | 19.6 | 43.6 | 184.5 | 134.5 | 7.0 | 204.1 | 195.7 | 122.4 | 84.5 | 35.1 | 5.6 | 176.2 | 147.8 | 82.3 | 22 | | |
| 23 | 300 | 220.1 | 122.0 | 143.6 | 143.6 | 157.4 | 155.6 | 157.4 | 141.0 | 226.6 | 189.0 | 226.6 | 202.2 | 157.4 | 186.6 | 44.5 | 19.8 | 44.5 | 182.4 | 122.0 | 7.9 | 210.7 | 205.3 | 129.6 | 89.5 | 5.9 | 186.5 | 155.4 | 85.7 | 23 | | | |
| 24 | 300 | 242.0 | 128.1 | 149.9 | 165.1 | 157.5 | 167.5 | 146.7 | 128.1 | 207.6 | 238.1 | 207.6 | 212.0 | 165.1 | 192.2 | 45.3 | 20.0 | 45.3 | 180.4 | 122.4 | 8.2 | 227.3 | 214.8 | 137.0 | 94.7 | 6.2 | 162.7 | 135.7 | 89.1 | 24 | | | |
| 25 | 300 | 253.8 | 134.2 | 155.2 | 172.8 | 165.3 | 62.0 | 172.8 | 151.6 | 249.6 | 216.1 | 249.6 | 221.6 | 172.8 | 199.6 | 46.1 | 20.2 | 46.1 | 192.6 | 136.6 | 6.7 | 238.9 | 224.3 | 144.4 | 100.0 | 66.7 | 6.6 | 207.4 | 170.2 | 92.6 | 25 | | |
| 26 | 300 | 265.8 | 140.3 | 162.5 | 172.1 | 170.5 | 180.5 | 186.5 | 241.1 | 224.6 | 241.1 | 231.3 | 180.5 | 207.3 | 46.8 | 20.3 | 46.8 | 167.0 | 144.1 | 9.1 | 250.6 | 233.8 | 182.1 | 103.4 | 70.7 | 6.9 | 217.8 | 177.6 | 94.0 | 26 | | | |
| 27 | 300 | 277.6 | 146.4 | 169.7 | 180.6 | 179.2 | 189.2 | 161.3 | 227.6 | 233.1 | 227.6 | 240.9 | 186.2 | 214.6 | 47.4 | 20.4 | 47.4 | 184.5 | 114.9 | 7.5 | 204.1 | 195.7 | 9.5 | 262.2 | 243.3 | 189.6 | 94.4 | 27 | | | | | |
| 28 | 300 | 269.7 | 162.5 | 174.9 | 195.8 | 181.5 | 79.4 | 195.6 | 166.2 | 241.5 | 264.2 | 264.2 | 195.6 | 195.6 | 184.2 | 48.0 | 20.6 | 48.0 | 184.2 | 159.7 | 10.0 | 273.9 | 252.7 | 167.8 | 123.8 | 7.6 | 223.8 | 192.3 | 102.9 | 28 | | | |
| 29 | 300 | 301.7 | 188.6 | 188.7 | 187.3 | 187.3 | 187.3 | 174.9 | 211.2 | 211.2 | 211.2 | 215.6 | 187.3 | 207.6 | 49.6 | 20.7 | 49.6 | 182.1 | 162.7 | 16.7 | 227.3 | 207.0 | 184.0 | 124.0 | 8.2 | 259.8 | 207.0 | 103.8 | 29 | | | | |
| 30 | 300 | 313.6 | 188.7 | 188.7 | 187.3 | 187.3 | 187.3 | 174.9 | 211.2 | 211.2 | 211.2 | 215.6 | 187.3 | 207.6 | 49.6 | 20.7 | 49.6 | 182.1 | 162.7 | 16.7 | 227.3 | 207.0 | 184.0 | 124.0 | 8.2 | 259.8 | 207.0 | 103.8 | 30 | | | | |

ONE LANE LIVE LOAD (H20-S16-44)

(Impact not included)

| LOADING TRUCK (T) | POSITIVE MOMENTS (kip feet) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | |
|-----------------------------------|---|------------|------------|--------------|--|------------|--------------|------------|---|------------|--------------|------------|--|------------|--------------|------------|---|------------|--------------|------------|--|------------|--------------|------------|--------------|
| | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | | CENTRAL SPANS ORDINARY REACTION END SHEAR AT MIDSPAN 2 EQUAL SPANS CENTRAL SPANS | | | | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | | CENTRAL SPANS ORDINARY REACTION END SHEAR AT MIDSPAN 2 EQUAL SPANS CENTRAL SPANS | | | | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | | CENTRAL SPANS ORDINARY REACTION END SHEAR AT MIDSPAN 2 EQUAL SPANS CENTRAL SPANS | | | | |
| ALTERNATIVE (A) LANE (L) | FEM @ CTR | FEM @ B | FEM @ C | FEM @ 2L | FEM @ B | FEM @ C | FEM @ .2L | FEM @ B | FEM @ .4L | FEM @ B | FEM @ .6L | FEM @ B | FEM @ .8L | FEM @ B | FEM @ .4L | FEM @ B | FEM @ .6L | FEM @ B | FEM @ .8L | FEM @ B | FEM @ .3L | FEM @ B | FEM @ .6L | FEM @ B | FEM @ .8L |
| 12-2 ACT | SBM @ CTR | SBM @ B | SBM @ C | SBM @ .2L | SBM @ B | SBM @ C | SBM @ .4L | SBM @ B | SBM @ .6L | SBM @ B | SBM @ .8L | SBM @ B | SBM @ .3L | SBM @ B | SBM @ .4L | SBM @ B | SBM @ .6L | SBM @ B | SBM @ .8L | SBM @ B | SBM @ .3L | SBM @ B | SBM @ .6L | SBM @ B | SBM @ .8L |
| 31-300 | 325.5A | 170.6 | 193.5 | 216.9A | 205.4 | 77.9 | 216.9A | 160.6 | 318.7A | 265.7 | 510.7 | 279.2 | 216.9A | 244.4 | 30.5T | 20.9A | 53.9T | 211.2L | 184.3 | 7.5 | 265.0T | 287.7 | 192.3L | 133.9 | 92.6 |
| 32-300 | 327.5 | 176.9 | 199.6 | 226.6 | 212.0 | 79.3 | 226.6 | 177.1 | 320.2 | 276.1 | 330.2 | 286.7 | 226.6 | 281.0 | 21.0 | 54.5 | 220.6 | 192.8 | 7.9 | 270.2 | 312.4 | 200.8 | 139.9 | 97.3 | |
| 33-300 | 349.5 | 182.9 | 205.8 | 234.2 | 218.6 | 10.8 | 234.2 | 31.0 | 302.5 | 248.4 | 341.6 | 306.2 | 234.2 | 289.4 | 21.1 | 55.0 | 230.0 | 201.4 | 8.3 | 284.6 | 327.0 | 205.4 | 146.1 | 102.1 | |
| 34-300 | 361.4 | 189.0 | 211.9 | 241.9 | 225.1 | 82.3 | 241.9 | 32.7 | 353.3 | 307.7 | 241.9 | 266.3 | 32.2 | 21.2 | 55.5 | 239.5 | 210.2 | 8.7 | 289.0 | 341.5 | 216.8 | 152.8 | 107.0 | | |
| 35-300 | 375.4 | 198.1 | 218.1 | 249.6 | 231.7 | 89.8 | 266.8 | 322.6 | 364.8 | 300.0 | 354.8 | 317.2 | 249.6 | 273.5 | 52.6 | 21.3 | 55.0 | 249.4 | 219.2 | 9.0 | 319.5 | 355.9 | 227.1 | 158.7 | 112.0 |
| 36-300 | 385.3 | 201.1 | 224.2 | 267.3 | 238.2 | 85.3 | 260.3 | 330.3 | 376.3 | 308.3 | 376.3 | 326.6 | 257.3 | 260.8 | 53.3 | 21.3 | 56.4 | 259.4 | 229.4 | 9.4 | 328.1 | 370.1 | 236.2 | 165.1 | 117.1 |
| 37-300 | 397.3 | 207.2 | 230.3 | 265.0 | 244.6 | 66.7 | 251.8 | 335.5 | 387.8 | 316.5 | 387.8 | 336.1 | 265.0 | 288.0 | 53.8 | 21.4 | 56.9 | 269.5 | 237.7 | 9.8 | 342.7 | 384.3 | 245.4 | 171.7 | 122.3 |
| 38-300 | 409.3 | 213.3 | 236.4 | 272.6 | 251.1 | 86.2 | 303.4 | 324.8 | 399.4A | 324.8 | 410.2 | 375.9 | 287.2 | 343.2 | 54.3 | 21.8 | 57.3 | 400.4 | 247.7 | 8.6 | 351.5 | 428.7 | 284.6 | 178.3 | 122.3 |
| 39-300 | 421.2 | 219.5 | 242.5 | 280.3 | 257.6 | 89.7 | 314.9 | 382.2 | 427.5 | 375.7 | 416.5 | 393.3 | 280.4 | 320.4 | 54.8 | 21.5 | 57.5 | 290.1 | 255.8 | 9.2 | 347.1 | 416.9 | 264.7 | 185.1 | 133.1 |
| 40-300 | 433.2 | 221.4 | 246.6 | 288.0 | 264.0 | 91.2 | 326.4 | 395.6 | 444.8 | 433.0 | 444.8 | 410.6 | 268.0 | 309.6 | 55.2 | 21.6 | 58.0 | 300.7 | 266.5 | 9.5 | 362.6 | 439.3 | 273.6 | 192.0 | 138.7 |
| 41-300 | 445.2 | 231.4 | 254.7 | 285.7 | 270.4 | 92.7 | 337.9 | 400.9 | 462.1 | 449.0 | 462.1 | 427.7 | 295.7 | 316.8 | 55.6 | 21.7 | 58.3 | 311.4 | 275.5 | 9.9 | 376.7 | 449.6 | 285.6 | 199.0 | 144.3 |
| 42-299 | 457.1 | 237.5 | 260.8 | 276.8 | 256.4 | 94.2 | 329.4 | 421.7 | 479.4 | 464.7 | 479.4 | 444.7 | 305.4 | 329.2 | 56.0 | 21.7 | 58.7 | 323.9 | 285.6 | 10.3 | 394.6 | 465.9 | 293.4 | 205.1 | 160.1 |
| 43-298 | 469.1A | 245.5 | 265.9 | 311.0 | 285.2 | 95.7 | 351.0 | 434.1 | 496.6 | 461.6 | 511.0 | 391.1 | 427.5 | 56.4 | 21.8 | 59.0 | 398.3 | 298.9 | 13.0 | 414.7 | 482.0 | 303.5 | 219.3 | 151.9 | |
| 44-296 | 520.9T | 286.5 | 354.2 | 318.7 | 289.6 | 97.2 | 372.5 | 446.2 | 513.9 | 495.7 | 513.9 | 478.3 | 318.7 | 338.2 | 56.7 | 21.8A | 59.3 | 344.6 | 307.3 | 11.0 | 426.8 | 490.1 | 315.7 | 220.6 | 161.9 |
| 45-294 | 538.7 | 296.6 | 365.3 | 326.4 | 296.0 | 98.7 | 384.0 | 458.1 | 531.2 | 495.0 | 531.2 | 485.3 | 326.4 | 345.3 | 57.1 | 22.0T | 59.6 | 355.9 | 317.9 | 11.4 | 443.0 | 514.0 | 324.0 | 228.0 | 168.0 |
| 46-292 | 556.5 | 306.9 | 376.2 | 354.1 | 302.4 | 100.1 | 395.6 | 469.6 | 546.5 | 526.0 | 546.5 | 511.5 | 384.1 | 352.5 | 57.4 | 22.3 | 59.8 | 367.4 | 328.5 | 11.8 | 459.3 | 530.0 | 354.5 | 255.5 | 174.2 |
| 47-291 | 574.3 | 317.1 | 387.1 | 341.8 | 308.7 | 101.6 | 407.0 | 480.9 | 565.6 | 540.9 | 565.6 | 527.9 | 341.6A | 359.6 | 57.7 | 22.5 | 60.1 | 379.0 | 339.5 | 12.2 | 478.7 | 545.6 | 345.1 | 245.1 | 180.5 |
| 48-289 | 592.2 | 327.5 | 397.6 | 384.9 | 315.1 | 103.1 | 416.5 | 491.5 | 583.0 | 557.7 | 583.0 | 544.5 | 416.6 | 480.6 | 56.0 | 22.7 | 60.3 | 390.8 | 350.5 | 13.0 | 492.7 | 561.6 | 385.8 | 250.8 | 188.9 |
| 49-287 | 610.0 | 337.6 | 406.5 | 357.1 | 321.4 | 104.6 | 430.1 | 502.7 | 600.3 | 360.6 | 500.3 | 450.1 | 564.6 | 564.6 | 56.3 | 22.9 | 60.6 | 402.8 | 361.8 | 13.0 | 468.6 | 577.3 | 366.7 | 220.6 | 193.4 |
| 50-285 | 627.0 | 347.6 | 419.1 | 364.8 | 327.8 | 106.1 | 441.6 | 513.5 | 517.6 | 584.9 | 517.6 | 576.7 | 441.6 | 579.1 | 55.6 | 23.0 | 60.8 | 414.9 | 379.2 | 13.3 | 525.1 | 592.9 | 377.0 | 228.0 | 168.0 |
| 51-284 | 645.7 | 357.6 | 429.7 | 372.5 | 334.1 | 107.6 | 483.1 | 520.8 | 534.9 | 592.6 | 543.1 | 593.4 | 508.6 | 522.2 | 58.2 | 23.2 | 61.0 | 422.2 | 384.5 | 13.7 | 561.7 | 608.5 | 389.0 | 278.3 | 193.1 |
| 52-282 | 663.5 | 367.7 | 440.2 | 390.2 | 340.4 | 109.1 | 484.6 | 534.0 | 652.2 | 613.7 | 652.2 | 604.6 | 564.5 | 607.5 | 59.1 | 23.4 | 61.2 | 439.6 | 395.6 | 14.1 | 585.4 | 624.1 | 405.8 | 282.9 | 192.6 |
| 53-281 | 681.4 | 377.7 | 450.6 | 387.8 | 346.0 | 110.6 | 476.2 | 544.1 | 665.4 | 628.0 | 659.4 | 624.7 | 475.2 | 621.5 | 59.3 | 23.5 | 61.4 | 452.2 | 408.3 | 14.5 | 587.5 | 639.5 | 411.0 | 220.5 | 140.9 |
| 54-279 | 693.3 | 387.6 | 461.0 | 395.5 | 353.1 | 112.1 | 487.7 | 554.1 | 648.7 | 642.1 | 685.7 | 640.6 | 487.7 | 655.4 | 59.6 | 23.7 | 61.6 | 465.0 | 420.3 | 14.9 | 591.6 | 655.0 | 423.4 | 299.5 | 227.5 |
| 55-278 | 717.1 | 397.6 | 471.3 | 403.2 | 359.4 | 113.6 | 499.2 | 563.9 | 704.0 | 656.4 | 699.2 | 649.2 | 593.6 | 670.3 | 59.8 | 23.9 | 61.8 | 477.9 | 432.5 | 15.3 | 505.5 | 670.3 | 435.1 | 308.0 | 234.7 |
| 56-276 | 735.0 | 407.5 | 481.5 | 410.9 | 365.7 | 115.1 | 510.7 | 575.6 | 721.3 | 670.3 | 721.3 | 672.1 | 510.7 | 662.9 | 60.0 | 24.0 | 62.0T | 491.0 | 444.9 | 15.7 | 572.3 | 685.7 | 447.0 | 316.6 | 241.9 |
| 57-275 | 752.9 | 417.3 | 491.6 | 420.4 | 377.2 | 116.1 | 522.2 | 583.1 | 738.6 | 684.2 | 738.6 | 687.5 | 522.2 | 676.5 | 60.2 | 24.2 | 62.5L | 504.2 | 457.4 | 16.1 | 642.1 | 701.0 | 459.0 | 320.0 | 234.0 |
| 58-273 | 770.8 | 427.2 | 501.9 | 431.8 | 384.5 | 117.6 | 537.1 | 592.6 | 755.0 | 690.9 | 755.8 | 703.4 | 592.5 | 744.2 | 60.1 | 24.4 | 63.1 | 517.5 | 470.0 | 16.5 | 555.9 | 716.2 | 471.0 | 323.5 | 232.5 |
| 59-272 | 788.6 | 437.0 | 512.1 | 447.6 | 394.5 | 118.6 | 545.3 | 601.9 | 733.1 | 711.8 | 773.1 | 718.9 | 545.3 | 753.5 | 60.6 | 24.6 | 63.8 | 531.1 | 482.9 | 16.9 | 562.7 | 734.5 | 485.5 | 327.6 | 232.5 |
| 60-270 | 808.8T | 446.6 | 522.1 | 456.8 | 404.5 | 119.1 | 556.0T | 611.1 | 790.4T | 734.4 | 755.8T | 715.9 | 556.0T | 746.6 | 64.4L | 24.8T | 64.4L | 544.8L | 495.8 | 17.3 | 569.2 | 786.6 | 496.6L | 352.0 | 232.0 |

ONE LANE LIVE LOAD (H20-516-4A)

(Impact not included)

POSITIVE MOMENTS (kip feet)

| LOADING | POSITIVE MOMENTS (kip feet) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | | | | | |
|-----------------|--------------------------------|-------|-------|--------|--------------------------|-------|--------|-------|--------------------------|-------|--------|-------|-----------------------------|-------|-------|--------|-----------------------|------------|-----------|-----------|-----------------------|-------|------------|-----------|-----------|-------|-------|-----|-----|
| | SIMPLE SPAN SHEARS & REACTIONS | | | | CENTRALLY SUPPORTED SPAN | | | | CENTRALLY SUPPORTED SPAN | | | | SIMPLY SUPPORTED SPAN | | | | SIMPLY SUPPORTED SPAN | | | | SIMPLY SUPPORTED SPAN | | | | | | | | |
| TRUCK (T) | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | | | | | |
| ALTERNATIVE (A) | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | | | | | |
| LANE (L) | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | | | | | |
| IMPACT R.T. | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | | | | | |
| IMPACT R.T. | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | | | | | |
| 61-269 | 824.47 | 495.6 | 532.2 | 868.37 | 886.1 | 340.2 | 866.37 | 820.2 | 807.77 | 739.8 | 565.37 | 780.2 | 81.07 | 28.07 | 65.0 | 889.81 | 809.0 | 17.7709.87 | 761.7 | 826.81 | 361.1 | 278.6 | 13.2301.47 | 861.3 | 380.2 | 61 | | | |
| 62-267 | 842.3 | 495.3 | 545.2 | 879.6 | 571.7 | 345.4 | 879.8 | 819.3 | 825.0 | 782.0 | 765.5 | 745.4 | 61.2 | 26.2 | 65.3 | 862.6 | 812.4 | 370.3 | 876.7 | 781.8 | 634.6 | 594.7 | 13.8156.5 | 873.1 | 385.4 | 62 | | | |
| 63-266 | 840.2 | 476.0 | 532.2 | 879.1 | 442.3 | 346.6 | 879.3 | 346.6 | 842.0 | 780.6 | 591.4 | 765.6 | 61.3 | 26.3 | 65.3 | 856.8 | 835.6 | 18.8743.7 | 781.9 | 820.4 | 584.9 | 570.6 | 13.8256.7 | 873.0 | 370.6 | 63 | | | |
| 64-265 | 878.1 | 485.7 | 862.1 | 802.9 | 594.6 | 349.6 | 802.9 | 547.1 | 842.0 | 899.5 | 780.0 | 602.8 | 769.6 | 61.5 | 26.5 | 67.0 | 801.1 | 849.6 | 16.8790.8 | 806.9 | 847.3 | 389.1 | 203.6 | 14.2346.0 | 884.7 | 377.7 | 64 | | |
| 65-265 | 896.0 | 435.4 | 572.1 | 814.4 | 606.3 | 352.8 | 814.4 | 606.3 | 876.0 | 795.4 | 876.0 | 811.2 | 614.4 | 782.6 | 61.7 | 26.7 | 87.6 | 818.8 | 869.2 | 18.3777.8 | 821.9 | 860.4 | 388.7 | 312.0 | 14.4358.6 | 889.4 | 380.8 | 65 | |
| 66-262 | 913.9 | 805.1 | 881.9 | 625.9 | 817.7 | 365.0 | 825.9 | 654.6 | 894.1 | 806.9 | 894.1 | 820.6 | 625.9 | 795.6 | 61.8 | 26.8 | 86.2 | 810.2 | 877.1 | 19.7784.9 | 888.8 | 878.8 | 401.8 | 320.8 | 14.7674.8 | 820.1 | 386.0 | 66 | |
| 67-260 | 931.0 | 814.7 | 891.6 | 637.4 | 829.1 | 368.3 | 829.1 | 637.4 | 873.5 | 911.4 | 873.5 | 801.2 | 911.4 | 801.4 | 801.4 | 881.2 | 20.1811.9 | 820.8 | 181.8 | 887.2 | 418.1 | 328.7 | 15.0688.1 | 631.8 | 391.2 | 67 | | | |
| 68-259 | 948.6 | 524.6 | 601.6 | 649.0 | 640.4 | 361.7 | 649.0 | 640.4 | 920.6 | 920.6 | 920.6 | 849.0 | 821.3 | 821.1 | 26.1 | 89.5 | 869.8 | 605.0 | 20.8829.0 | 866.7 | 800.6 | 427.9 | 397.8 | 15.7616.8 | 642.6 | 395.6 | 68 | | |
| 69-258 | 967.7 | 554.0 | 611.4 | 650.5 | 651.5 | 364.5 | 650.5 | 651.5 | 920.6 | 945.9 | 945.9 | 864.0 | 880.5 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 884.0 | 401.4 | | |
| 70-256 | 985.6 | 849.6 | 821.2 | 672.0 | 683.0 | 367.4 | 672.0 | 683.0 | 888.9 | 888.9 | 888.9 | 840.2 | 963.2 | 870.7 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 872.0 | 406.5 | | |
| 71-255 | 1004.5 | 831 | 884 | 674 | 870 | 684 | 707 | 880 | 873 | 880 | 820 | 884 | 819 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 825 | 60 | | |
| 72-254 | 1021.6 | 853 | 841 | 689 | 689 | 689 | 737 | 698 | 687 | 988 | 817 | 688 | 672 | 62.7 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72 | | |
| 73-253 | 1039.7 | 872 | 850 | 707 | 697 | 724 | 707 | 800 | 1018 | 932 | 707 | 884 | 62.8 | 26.8 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 82.0 | 71 | | |
| 74-251 | 1057.7 | 882 | 860 | 718 | 705 | 735 | 718 | 732 | 1032 | 913 | 1032 | 947 | 718 | 897 | 62.9 | 26.9 | 78.4 | 78.4 | 78.4 | 78.4 | 78.4 | 78.4 | 78.4 | 78.4 | 78.4 | 78.4 | 74 | | |
| 75-250 | 1075.8 | 891 | 870 | 720 | 718 | 751 | 730 | 750 | 1050 | 926 | 1050 | 926 | 750 | 826 | 63.0 | 27.0 | 74.0 | 74.0 | 74.0 | 74.0 | 74.0 | 74.0 | 74.0 | 74.0 | 74.0 | 74.0 | 75 | | |
| 76-249 | 1093.8 | 901 | 879 | 741 | 750 | 854 | 741 | 748 | 1087 | 977 | 741 | 987 | 63.2 | 27.2 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 | 76 | | |
| 77-248 | 1111.6 | 610 | 589 | 753 | 741 | 866 | 753 | 767 | 1084 | 982 | 783 | 984 | 63.3 | 27.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 78.3 | 77 | | |
| 78-246 | 1129.6 | 620 | 699 | 764 | 762 | 859 | 764 | 765 | 1101 | 1007 | 764 | 846 | 63.4 | 27.4 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78 | | |
| 79-245 | 1147.5 | 628 | 708 | 776 | 763 | 891 | 776 | 775 | 1119 | 978 | 1119 | 1021 | 776 | 889 | 63.6 | 27.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78.6 | 78 | | |
| 80-244 | 1165.6 | 639 | 718 | 787 | 774 | 894 | 787 | 781 | 1136 | 1038 | 787 | 971 | 63.6 | 27.6 | 77.2 | 77.2 | 781 | 789 | 784 | 784 | 784 | 784 | 784 | 784 | 784 | 784 | 79 | | |
| 81-243 | 1183.6 | 646 | 727 | 798 | 785 | 897 | 798 | 800 | 1153 | 1061 | 798 | 985 | 63.7 | 27.7 | 77.6 | 77.6 | 886 | 805 | 1058 | 1058 | 791 | 886 | 488 | 19.3 | 889 | 783 | 463 | | |
| 82-241 | 1201.6 | 656 | 737 | 810 | 796 | 898 | 810 | 810 | 1171 | 1071 | 1171 | 1066 | 810 | 986 | 63.8 | 27.8 | 78.6 | 78.6 | 885 | 822 | 1073 | 1073 | 608 | 886 | 488 | 19.4 | 889 | 782 | 462 |
| 83-240 | 1219.6 | 667 | 757 | 821 | 807 | 902 | 821 | 822 | 1085 | 1081 | 822 | 1007 | 63.9 | 27.9 | 79.1 | 79.1 | 887 | 822 | 886 | 886 | 791 | 886 | 488 | 20.3 | 889 | 781 | 461 | | |
| 84-239 | 1237.7 | 677 | 766 | 833 | 817 | 904 | 833 | 833 | 1098 | 1083 | 1098 | 1019 | 84.0 | 28.0 | 79.8 | 79.8 | 885 | 822 | 1104 | 1104 | 803 | 885 | 488 | 20.4 | 889 | 782 | 460 | | |
| 85-238 | 1255.6 | 686 | 785 | 845 | 828 | 907 | 845 | 845 | 1106 | 1086 | 1106 | 1032 | 84.1 | 28.1 | 80.4 | 80.4 | 886 | 822 | 1116 | 1116 | 804 | 886 | 488 | 20.5 | 889 | 783 | 461 | | |
| 86-237 | 1273.6 | 695 | 795 | 855 | 849 | 906 | 855 | 855 | 1120 | 1068 | 1120 | 1044 | 84.2 | 28.2 | 81.0 | 81.0 | 886 | 822 | 1131 | 1131 | 805 | 886 | 488 | 20.6 | 889 | 784 | 462 | | |
| 87-236 | 1291.7 | 705 | 781 | 865 | 856 | 907 | 865 | 865 | 1139 | 1087 | 1139 | 1043 | 84.3 | 28.3 | 81.7 | 81.7 | 893 | 822 | 1156 | 1156 | 806 | 886 | 488 | 20.7 | 889 | 785 | 463 | | |
| 88-235 | 1309.7 | 714 | 792 | 874 | 861 | 908 | 874 | 874 | 1154 | 1094 | 1154 | 1067 | 84.4 | 28.4 | 82.3 | 82.3 | 891 | 822 | 1174 | 1174 | 807 | 886 | 488 | 20.8 | 889 | 786 | 464 | | |
| 89-234 | 1328.6 | 724 | 804 | 881 | 871 | 911 | 881 | 881 | 1169 | 1107 | 1169 | 1072 | 84.5 | 28.5 | 83.0 | 83.0 | 901 | 822 | 1191 | 1191 | 810 | 886 | 488 | 20.9 | 889 | 787 | 465 | | |
| 90-233 | 1346.7 | 733 | 813 | 892 | 892 | 927 | 892 | 892 | 1183 | 1120 | 1183 | 907 | 84.6 | 28.6 | 83.6 | 83.6 | 901 | 822 | 1209 | 1209 | 811 | 886 | 488 | 21.0 | 889 | 788 | 466 | | |



Diagram illustrating loading conditions for one lane live load.

VOL. III Design Aids

BRIDGE PLANNING AND DESIGN MANUAL

May 1962

9-25

ONE LANE LIVE LOAD (H20-516-44)

[Image set header]

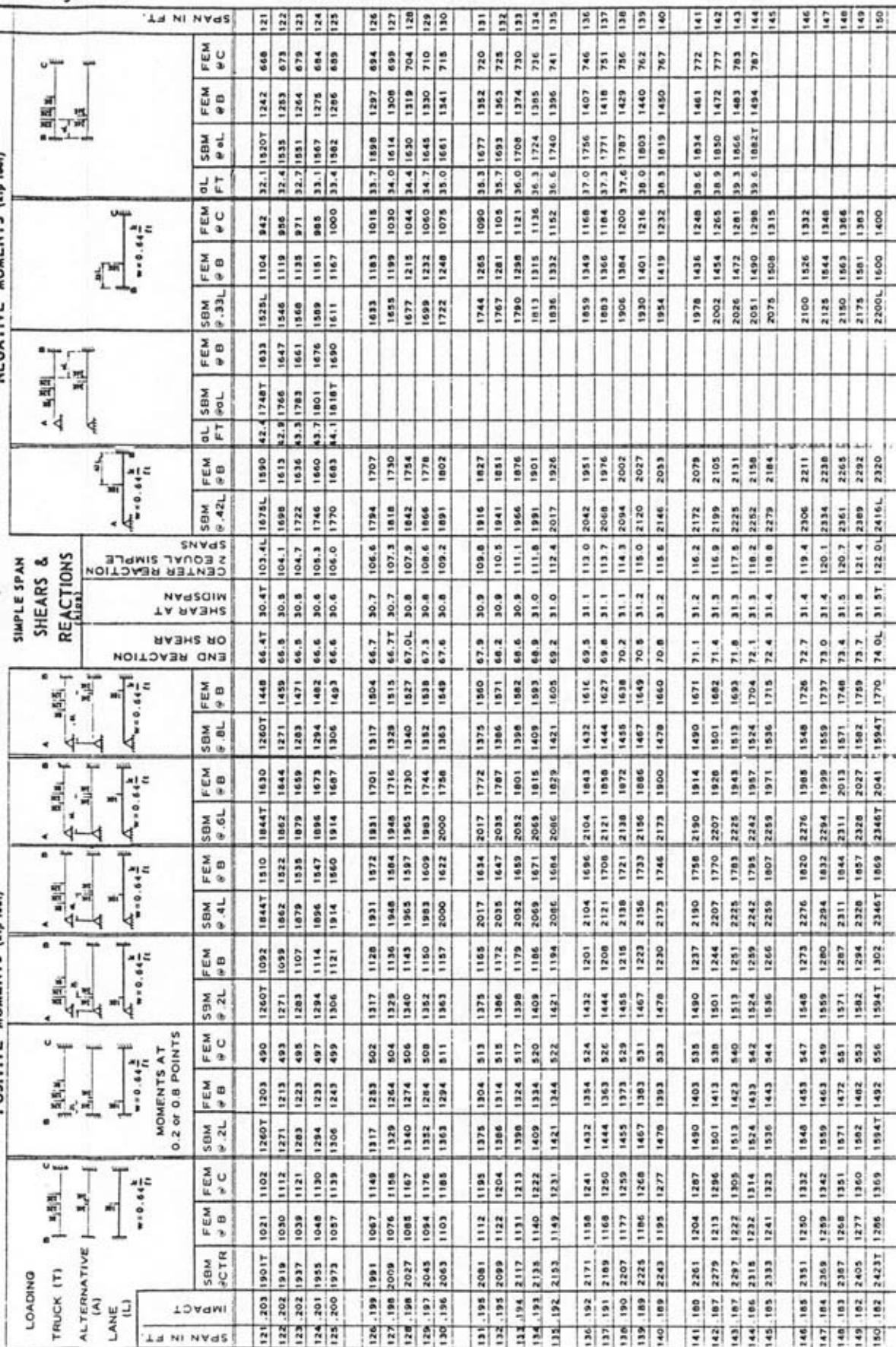
| ONE LANE LIVE LOAD (H20-S16-44) | | | | | | | | | | | |
|---------------------------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| (Impact not included) | | | | | | | | | | | |
| POSITIVE MOMENTS (kip feet) | | | | | | | | | | | |
| LOADING | | | | | | | | | | | |
| TRUCK (T) | w = 0.64 k | c | w = 0.64 k |
| ALTERNATIVE 1 LANE (L) | w = 0.64 k | | w = 0.64 k |
| SPANS #CTR #B | SBM FEM | SBM FEM | SBM FEM |
| 2.42 ft | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. | @ C. @ B. |
| MOMENTS AT 0.2 OR 0.8 POINTS | | | | | | | | | | | |
| 91 - .231 | 13627 742 | 823 | 9147 893 | 421 | 9147 867 | 867 | 13267 1132 | 1198 | 9147 1103 | 64.6T | 28.6T |
| 92 - .230 | 1380 752 | 832 | 925 903 | 424 | 925 875 | 1343 | 1212 | 925 | 1115 | 64.7 | 26.7 |
| 93 - .239 | 1398 761 | 841 | 937 914 | 426 | 937 903 | 1158 | 1361 | 937 | 1127 | 64.8 | 26.8 |
| 94 - .239 | 1416 770 | 851 | 946 924 | 428 | 946 890 | 1376 | 1171 | 946 1188 | 64.9 | 26.9 | 86.6 |
| 95 - .237 | 1434 780 | 860 | 956 935 | 451 | 960 888 | 1395 | 1183 | 960 1190 | 64.9 | 26.9 | 86.6 |
| 96 - .236 | 1452 789 | 870 | 972 943 | 453 | 972 906 | 1412 | 1196 | 972 1271 | 272 | 1162 | 65.0 |
| 97 - .225 | 1470 798 | 879 | 983 956 | 455 | 983 913 | 1430 | 1209 | 983 1174 | 65.1 | 28.1 | 86.7 |
| 98 - .224 | 1488 808 | 886 | 995 986 | 458 | 995 921 | 1447 | 1221 | 995 1185 | 65.1 | 28.1 | 86.7 |
| 99 - .223 | 1506 817 | 895 | 1006 995 | 277 | 440 | 1006 | 929 | 1006 1157 | 65.2 | 29.2 | 89.4 |
| 100 - .222 | 1524 826 | 907 | 1018 987 | 442 | 1018 936 | 1482 | 1247 | 1018 1209 | 65.3 | 29.3 | 90.0 |
| 101 - .221 | 1542 836 | 916 | 1029 998 | 445 | 1029 944 | 1499 | 1259 | 1029 1041 | 1220 | 65.3 | 29.3 |
| 102 - .220 | 1560 845 | 926 | 1041 1006 | 447 | 1041 951 | 1516 | 1272 | 1041 1357 | 1232 | 65.4 | 29.4 |
| 103 - .219 | 1578 854 | 935 | 1052 1019 | 449 | 1052 959 | 1533 | 1284 | 1052 1372 | 1243 | 65.5 | 29.5 |
| 104 - .218 | 1596 863 | 945 | 1064 1029 | 452 | 1064 966 | 1551 | 1297 | 1064 1386 | 1255 | 65.6 | 29.6 |
| 05 - .217 | 1614 873 | 954 | 1075 1039 | 454 | 1075 974 | 1566 | 1310 | 1075 1401 | 1266 | 65.6 | 29.6 |
| 106 - .216 | 1632 882 | 963 | 1087 1050 | 456 | 1087 981 | 1585 | 1322 | 1087 1418 | 1276 | 65.7 | 29.7 |
| 107 - .216 | 1650 891 | 973 | 1096 1056 | 459 | 1096 988 | 1603 | 1355 | 1096 1444 | 1298 | 65.7 | 29.7 |
| 108 - .215 | 1668 900 | 982 | 1110 1070 | 461 | 1110 996 | 1620 | 1347 | 1110 1444 | 1301 | 65.8 | 29.8 |
| 109 - .214 | 1686 910 | 991 | 1121 1081 | 463 | 1121 1003 | 1637 | 1360 | 1121 1488 | 1312 | 65.8 | 29.8 |
| 110 - .213 | 1704 919 | 1000 | 1133 1091 | 465 | 1133 1011 | 1654 | 1372 | 1133 1479 | 1324 | 65.9 | 29.9 |
| 111 - .212 | 1722 928 | 1010 | 1144 1101 | 468 | 1144 1046 | 1672 | 1385 | 1144 1487 | 1376 | 65.9 | 29.9 |
| 112 - .211 | 1740 937 | 1019 | 1156 1111 | 470 | 1156 1026 | 1689 | 1397 | 1156 1447 | 1398 | 66.0 | 30.0 |
| 113 - .210 | 1757 947 | 1028 | 1167 1122 | 472 | 1167 1033 | 1706 | 1410 | 1167 1472 | 1403 | 66.1 | 30.1 |
| 114 - .209 | 1775 956 | 1038 | 1179 1132 | 475 | 1179 1041 | 1724 | 1530 | 1179 1525 | 1414 | 66.3 | 30.3 |
| 115 - .208 | 1793 965 | 1047 | 1190 1142 | 477 | 1190 1048 | 1741 | 1435 | 1190 1544 | 1426 | 66.4 | 30.4 |
| 116 - .207 | 1811 974 | 1056 | 1202 1152 | 479 | 1202 1053 | 1758 | 1447 | 1202 1544 | 1435 | 66.5 | 30.5 |
| 117 - .207 | 1829 984 | 1065 | 1213 1162 | 481 | 1213 1063 | 1775 | 1460 | 1213 1575 | 1446 | 66.6 | 30.6 |
| 118 - .206 | 1847 993 | 1075 | 1225 1173 | 484 | 1225 1070 | 1793 | 1472 | 1225 1587 | 1456 | 66.7 | 30.7 |
| 119 - .205 | 1865 1002 | 1084 | 1235 1180 | 486 | 1235 1077 | 1810 | 1620 | 1235 1626 | 1473 | 66.8 | 30.8 |
| 120 - .204 | 1883 1011 | 1093 | 1246 1193 | 488 | 1246 1084 | 1827 | 1647 | 1246 1647 | 1483 | 66.9 | 30.9 |

ONE LANE LIVE LOAD (H20-516-44)

(Impact not included)

POSITIVE MOMENTS (kip feet)

| LOADING | SIMPLE SPAN SHEARS & REACTIONS | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | |
|--------------------|--------------------------------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|-----------------------------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|
| | A 5/8 H | | | | B 5/8 H | | | | C 5/8 H | | | | A 5/8 H | | | | B 5/8 H | | | | C 5/8 H | | | |
| TRUCK (T) | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM |
| ALTERNATIVE (A) | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM |
| LANE (L) | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM |
| 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | |
| 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | |
| 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | |
| 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | |
| 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | |
| 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | |
| 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | |
| 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | |
| 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | |
| 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | |
| 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | |
| 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | |
| 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | |
| 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | |
| 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | |
| 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | |
| 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | |
| 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | |
| 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | |
| 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | |
| 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | |
| 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | |
| 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | |
| 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | |
| 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | |
| 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | |
| 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | |
| 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | |
| 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | |
| 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | |
| 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | |
| 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | |
| 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | |
| 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | |
| 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |



| ONE LANE LIVE LOAD (H20-S16-44) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | | | | | | | |
|--|--|---|---|---|---|---|---|---|---|---|---|---|--|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| POSITIVE MOMENTS (kip feet) | | | | | | | | | | | | (Impact not included) | | | | | | | | | | | | | | | | | | |
| IMPACT IN SPAN | FEM @ CTR | FEM @ B | FEM @ C | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | FEM @ B | FEM @ C | FEM @ B | FEM @ C | FEM @ B | FEM @ C | FEM @ B | FEM @ C | FEM @ B | FEM @ C | FEM @ B | FEM @ C | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.51 1.61 2.441T 1.205 1.378 1.605T 1.802 558 1.605T 1.908 2.963T 1.811 2.933T 2.016 1.605T 1.781 31.1BT 122.6L 2.844L 2.847 | 1.52 1.61 2.459 1.305 1.387 1.617 1.512 560 1.617 1.916 2.964 2.016 1.617 1.792 74.3L 31.6 123.3 2.872 2.875 | 1.53 1.60 2.477 1.314 1.387 1.618 1.520 562 1.626 1.923 2.967 2.014 1.626 1.803 75.0 31.6 123.9 2.890 2.893 | 1.54 1.78 2.495 1.323 1.406 1.640 1.640 564 1.640 1.918 2.918 2.016 1.640 1.814 75.3 31.6 124.6 2.919 2.921 | 1.55 1.79 2.513 1.332 1.418 1.651 1.651 567 1.651 1.921 2.921 2.017 1.651 1.825 75.6 31.7 125.2 2.957 2.959 | 1.56 1.78 2.531 1.341 1.424 1.663 1.651 569 1.663 1.944 2.931 2.019 1.663 1.835 75.9 31.7 125.8 2.986 2.987 | 1.57 1.77 2.548 1.350 1.433 1.674 1.661 571 1.674 1.952 2.941 2.020 1.674 1.846 76.2 31.7 126.5 2.918 2.919 | 1.58 1.77 2.566 1.360 1.442 1.686 1.671 573 1.686 1.959 2.950 2.020 1.686 1.857 76.6 31.7 127.1 2.944 2.944 | 1.59 1.76 2.584 1.359 1.451 1.697 1.680 576 1.697 1.965 2.958 2.020 1.697 1.866 76.9 31.6 127.6 2.973 2.973 | 1.60 1.75 2.602 1.378 1.461 1.709 1.690 578 1.709 1.973 2.967 2.021 1.709 1.879 77.2 31.6 128.4 2.992 2.992 | 1.61 1.75 2.620 1.387 1.470 1.720 1.690 580 1.720 1.980 2.966 2.021 1.720 1.890 77.6 31.6 129.0 2.993 2.993 | 1.62 1.74 2.638 1.396 1.479 1.732 1.610 582 1.732 1.987 2.975 2.021 1.732 1.901 77.8 31.6 129.7 2.971 2.971 | 1.63 1.74 2.656 1.405 1.486 1.745 1.619 585 1.745 1.994 2.978 2.021 1.745 1.912 78.2 31.9 130.3 2.970 2.970 | 1.64 1.73 2.674T 1.414 1.497 1.755 1.629 587 1.755 1.997 2.974 2.021 1.755 1.923 78.6 31.9 131.0 2.975 2.975 | 1.65 1.72 2.691L 1.823 1.639 1.639 589 1.669L 1.645 1.998 2.976 2.021 1.669 1.933 79.0 31.9 131.6 2.985 2.985 | 1.66 1.72 2.695L 1.843 1.778 1.649 591 1.669 1.649 1.991 2.978 2.021 1.669 1.944 79.1 32.0 132.2 2.981 2.981 | 1.67 1.71 2.695 1.853 1.789 1.659 594 1.690 1.659 1.993 2.983 2.021 1.690 1.955 79.4 32.0 132.9 2.980 2.980 | 1.68 1.71 2.693 1.853 1.801 1.685 595 1.692 1.685 1.995 2.985 2.021 1.692 1.966 79.8 32.0 133.5 2.984 2.984 | 1.69 1.70 2.695 1.864 1.812 1.688 596 1.693 1.688 1.997 2.986 2.021 1.693 1.977 80.1 32.0 134.2 2.975 2.975 | 1.70 1.69 2.677 1.822 1.822 1.688 599 1.695 1.688 1.998 2.986 2.020 1.695 1.986 80.4 32.0 134.8 2.904 2.904 | 1.71 1.69 2.691 1.843 1.843 1.697 602 1.695 1.697 2.003 2.984 2.020 1.695 1.999 80.7 32.1 135.4 2.935 2.935 | 1.72 1.68 2.691 1.847 1.707 605 2.010 2.064 2.015 2.087 3.018 2.061 2.047 2.009 61.0 32.1 136.1 2.966 2.963 | 1.73 1.67 2.691 1.853 1.758 610 2.011 2.068 2.016 2.091 3.017 2.071 2.052 2.020 61.4 32.1 136.7 2.989 2.994 | 1.74 1.67 2.692 2.006 1.870 1.726 609 2.051 2.073 2.077 2.097 3.023 2.070 2.050 2.021 61.4 32.1 137.4 3.025 3.025 | 1.75 1.67 2.697 2.027 1.882 1.726 611 2.022 2.075 2.094 2.099 3.028 2.042 2.020 2.021 62.0 32.2 138.0 3.016 3.016 | 1.76 1.66 2.707 2.048 1.895 1.746 614 2.090 2.085 2.086 2.098 3.019 2.010 2.003 2.021 62.3 32.2 138.6 3.008 3.008 | 1.77 1.66 2.705 2.049 1.895 1.755 615 2.114 2.082 2.071 2.091 3.017 2.011 2.003 2.021 62.6 32.2 139.3 3.024 3.024 | 1.78 1.65 2.705 2.050 1.896 1.756 616 2.114 2.083 2.072 2.092 3.018 2.012 2.004 2.021 62.6 32.2 139.9 3.027 3.027 | 1.79 1.64 2.709 2.052 1.894 1.758 617 2.115 2.084 2.073 2.093 3.019 2.012 2.004 2.021 62.9 32.2 140.6 3.029 3.029 | 1.80 1.64 2.702L 2.113 1.895 1.784 623 2.177L 2.093 2.061 2.086 3.016 2.014 2.006 2.021 63.1 32.2 141.2L 3.024L 3.024 | 1.81 1.64 2.702L 2.113 1.895 1.784 623 2.177L 2.093 2.061 2.086 3.016 2.014 2.006 2.021 63.1 32.2 141.2L 3.024L 3.024 |

SPAN IN FT.

May 1962

| LOADING TRUCK (T) | ONE LANE LIVE LOAD (H20-516-44) (Impact not included) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | | | | | |
|-------------------------------|--|------|-------|--------------------|------|-------|--------------------------------------|-------|------|--------------------|-------|-------|--|-------|--------|--------------------|-------|-------|-------------------------------------|------|------|---|-----|-----|-------------------------|-----|-----|-----|-----|
| | POSITIVE MOMENTS (kip feet) | | | | | | SIMPLE SPAN SHEARS & REACTIONS | | | | | | CENTRAL SPAN 2 EQUAL SHEAR OR REACTION | | | | | | MIDSPAN SHEAR AT END REACTION | | | MIDSPAN SHEAR AT 2 EQUAL SHEAR OR REACTION | | | SPANS SIMPLIFICATION | | | | |
| IMPACT FACT. P.D.A.C.T. | ALTERNATIVE (A) | | | ALTERNATIVE (B) | | | ALTERNATIVE (C) | | | ALTERNATIVE (D) | | | ALTERNATIVE (E) | | | ALTERNATIVE (F) | | | ALTERNATIVE (G) | | | ALTERNATIVE (H) | | | ALTERNATIVE (I) | | | | |
| | SBM | FEM | SBM | SBM | FEM | SBM | SBM | FEM | SBM | SBM | FEM | SBM | SBM | FEM | SBM | SBM | FEM | SBM | SBM | FEM | SBM | SBM | FEM | OL | SBM | FEM | | | |
| 181.163 | 3485L | 2185 | 1981T | 1794 | 625 | 2198L | 2934 | 5288L | 3168 | 3288L | 1981T | 2107 | 83.9L | 52.9T | 141.8L | 3956L | 3924B | 3084L | 2230 | 1889 | 181 | 181 | 181 | 181 | 181 | 181 | 181 | | |
| 182.163 | 3469 | 2176 | 1962 | 1804 | 627 | 2220 | 2984 | 5310 | 3200 | 3350 | 3279 | 1962 | 2117 | 84.2 | 32.3 | 142.8 | 3987 | 3280 | 3083 | 2282 | 2009 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | |
| 183.162 | 3503 | 2198 | 1986 | 1874 | 1813 | 629 | 2242 | 2986 | 3353 | 3235 | 3353 | 3212 | 1974 | 2128 | 84.6 | 52.9 | 143.1 | 3420 | 3313 | 3113 | 2274 | 2030 | 183 | 183 | 183 | 183 | 183 | 183 | 183 |
| 184.162 | 3538 | 2220 | 1985 | 1873 | 1833 | 634 | 2285 | 3026 | 3395 | 3265 | 3395 | 3344 | 2139 | 84.9 | 52.5 | 143.5 | 3493 | 3346 | 3144 | 2296 | 2051 | 184 | 184 | 184 | 184 | 184 | 184 | 184 | |
| 185.161 | 3571 | 2242 | 1997 | 1893 | 1834 | 634 | 2285 | 3088 | 3428 | 3237 | 3428 | 3377 | 1997 | 2180 | 85.2 | 32.4 | 144.4 | 3466 | 3379 | 3174 | 2318 | 2072 | 185 | 185 | 185 | 185 | 185 | 185 | 185 |
| 186.161 | 3605 | 2264 | 2008 | 1842 | 1836 | 2307 | 3089 | 3440 | 3390 | 3440 | 3410 | 2008 | 2160 | 85.5 | 52.4 | 148.0 | 3810 | 3412 | 3204 | 2341 | 2093 | 186 | 186 | 186 | 186 | 186 | 186 | 186 | |
| 187.160 | 3639 | 2286 | 2020 | 1852 | 1856 | 2329 | 3121 | 3493 | 3393 | 3493 | 3444 | 2020 | 2171 | 85.6 | 32.4 | 148.7 | 3553 | 3440 | 3236 | 2364 | 2114 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | |
| 188.160 | 3674 | 2308 | 2031 | 1852 | 1841 | 2351 | 3152 | 3527 | 3386 | 3527 | 3477 | 2031 | 2182 | 86.2 | 32.4 | 146.6 | 3586 | 3479 | 3265 | 2386 | 2136 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | |
| 189.159 | 3708 | 2330 | 2043 | 1871 | 1843 | 2373 | 3184 | 3560 | 3429 | 3560 | 3511 | 2043 | 2193 | 86.5 | 52.4 | 147.0 | 3820 | 3412 | 3296 | 2408 | 2157 | 189 | 189 | 189 | 189 | 189 | 189 | 189 | |
| 190.159 | 3743 | 2353 | 2054 | 1881 | 1845 | 2396 | 3216 | 3599 | 3463 | 3599 | 3545 | 2084 | 2203 | 86.8 | 52.5 | 147.6 | 3654 | 3546 | 3327 | 2432 | 2179 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | |
| 191.158 | 3778 | 2375 | 2076 | 1891 | 1847 | 2416 | 3249 | 3627 | 3498 | 3627 | 3678 | 2086 | 2214 | 87.1 | 52.5 | 148.2 | 3688 | 3590 | 3386 | 2485 | 2200 | 191 | 191 | 191 | 191 | 191 | 191 | 191 | |
| 192.158 | 3813 | 2398 | 2077 | 1890 | 1850 | 2440 | 3281 | 3651 | 3520 | 3651 | 3613 | 2077 | 2228 | 87.4 | 32.6 | 148.9 | 3723 | 3614 | 3409 | 2476 | 2222 | 192 | 192 | 192 | 192 | 192 | 192 | 192 | |
| 193.157 | 3848 | 2421 | 2089 | 1910 | 1852 | 2463 | 3319 | 3694 | 3564 | 3694 | 3647 | 2089 | 2236 | 87.6 | 32.5 | 149.5 | 3757 | 3648 | 3441 | 2501 | 2244 | 193 | 193 | 193 | 193 | 193 | 193 | 193 | |
| 194.157 | 3884 | 2444 | 2100 | 1944 | 1855 | 2486 | 3346 | 3729 | 3658 | 3729 | 3681 | 2100 | 2246 | 86.1 | 32.5 | 150.2 | 3792 | 3683 | 3462 | 2526 | 2266 | 194 | 194 | 194 | 194 | 194 | 194 | 194 | |
| 195.156 | 3920 | 2467 | 2112 | 1929 | 1856 | 2506 | 3378 | 3763 | 3632 | 3763 | 3716 | 2112 | 2287 | 86.4 | 32.6 | 150.8 | 3627 | 3717 | 3484 | 2546 | 2286 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | |
| 196.156 | 3955 | 2490 | 2124 | 1939 | 1856 | 2631 | 3412 | 3797 | 3666 | 3797 | 3751 | 2124 | 2268 | 86.7 | 32.6 | 151.4 | 3861 | 3752 | 3516 | 2572 | 2310 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | |
| 197.155 | 3981 | 2513 | 2135 | 1948 | 1861 | 2654 | 3445 | 3852 | 3700 | 3852 | 3786 | 2135 | 2279 | 86.0 | 32.6 | 152.1 | 3897 | 3787 | 3548 | 2695 | 2332 | 197 | 197 | 197 | 197 | 197 | 197 | 197 | |
| 198.155 | 4027 | 2536 | 2147 | 1958 | 1863 | 2677 | 3478 | 3886 | 3728 | 3886 | 3821 | 2147 | 2289 | 86.4 | 32.6 | 152.7 | 3922 | 3822 | 3580 | 2618 | 2358 | 198 | 198 | 198 | 198 | 198 | 198 | 198 | |
| 199.154 | 4064 | 2550 | 2204 | 1965 | 1867 | 2691 | 3512 | 3917 | 3770 | 3917 | 3856 | 2166 | 2300 | 86.7 | 32.6 | 153.4 | 3987 | 3887 | 3612 | 2643 | 2377 | 199 | 199 | 199 | 199 | 199 | 199 | 199 | |
| 200.154 | 4100 | 2583 | 2170 | 1977 | 1867 | 2626 | 3546 | 3935 | 3805 | 3935 | 3896 | 2170 | 2311 | 90.0 | 32.6 | 154.0 | 4003 | 3893 | 3644 | 2667 | 2400 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | |
| 201.153 | 4137 | 2607 | 2181 | 1987 | 1870 | 2647 | 3579 | 3971 | 3840 | 3971 | 3922 | 2181 | 2321 | 90.3 | 32.7 | 154.6 | 4036 | 3926 | 3677 | 2691 | 2423 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | |
| 202.153 | 4173 | 2631 | 2193 | 1986 | 1872 | 2671 | 3613 | 4006 | 3878 | 4006 | 3962 | 2193 | 2332 | 90.6 | 32.7 | 155.3 | 4074 | 3964 | 3710 | 2718 | 2446 | 202 | 202 | 202 | 202 | 202 | 202 | 202 | |
| 203.152 | 4210 | 2655 | 2204 | 2006 | 1874 | 2685 | 3648 | 4042 | 3911 | 4042 | 3989 | 2204 | 2343 | 91.0 | 32.7 | 155.9 | 4110 | 4000 | 3742 | 2738 | 2468 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | |
| 204.152 | 4247 | 2679 | 2216 | 2015 | 1876 | 2716 | 3682 | 4077 | 3948 | 4077 | 4034 | 2216 | 2354 | 91.3 | 32.7 | 156.6 | 4147 | 4034 | 3775 | 2764 | 2492 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | |
| 205.152 | 4285 | 2703 | 2227 | 2026 | 1878 | 2742 | 3716 | 4113 | 3982 | 4113 | 4070 | 2227 | 2384 | 91.6 | 32.7 | 157.3 | 4185 | 4072 | 3806 | 2786 | 2515 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | |
| 206.151 | 4322 | 2727 | 2239 | 2034 | 1881 | 2766 | 3751 | 4149 | 4018 | 4149 | 4107 | 2239 | 2376 | 91.9 | 32.7 | 157.8 | 4218 | 4108 | 3842 | 2813 | 2539 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | |
| 207.151 | 4359 | 2751 | 2250 | 2044 | 1883 | 2790 | 3786 | 4185 | 4084 | 4185 | 4143 | 2250 | 2386 | 92.3 | 32.8 | 158.5 | 4256 | 4148 | 3875 | 2857 | 2561 | 207 | 207 | 207 | 207 | 207 | 207 | 207 | |
| 208.150 | 4397 | 2776 | 2262 | 2054 | 1891 | 2814 | 4021 | 4221 | 4180 | 4221 | 4143 | 2262 | 2396 | 92.6 | 32.8 | 159.1 | 4293 | 4182 | 3909 | 2885 | 2608 | 208 | 208 | 208 | 208 | 208 | 208 | 208 | |
| 209.150 | 4435 | 2800 | 2273 | 2063 | 1898 | 2838 | 4048 | 4228 | 4128 | 4228 | 4177 | 2273 | 2407 | 92.9 | 32.8 | 159.8 | 4350 | 4218 | 3942 | 2887 | 2609 | 209 | 209 | 209 | 209 | 209 | 209 | 209 | |
| 210.149 | 4473L | 2824 | 2284 | 2073 | 1901 | 2861 | 4084 | 4284L | 4182 | 4284 | 4254 | 2284L | 2418 | 93.2L | 32.8 | 160.4L | 4397L | 4285L | 3976L | 2892 | 2632 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | |

| ONE LANE LIVE LOAD (H20-516-44) | | | | | | | | | | | | NEGATIVE MOMENTS (kip foot) | | | | | | | | | | | |
|--|---|------|------|-------|------|------|-------|------|-------|-------|-------|---|-------|--------|-------|--------|--------|-------|------|-------|------|------|------|
| POSITIVE MOMENTS (kip foot) (Impact not included) | | | | | | | | | | | | NEGATIVE MOMENTS (kip foot) | | | | | | | | | | | |
| LOADING | SIMPLE SPAN SHEARS & REACTIONS (A) | | | | | | | | | | | SIMPLE SPAN SHEARS & REACTIONS (B) | | | | | | | | | | | |
| | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | |
| TRUCK (T) | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | |
| ALTERNATIVE (A) | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | |
| LANE (L) | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | |
| IMPACT IN FT. | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | |
| SPANN | 0.6CTR | 0.6C | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | 0.6L | |
| 211.148 | 48111L | 2849 | 2849 | 22887 | 2062 | 692 | 2887L | 5926 | 4311L | 4200 | 4311L | 4221 | 22887 | 2428 | 91.6L | 92.87 | 161.0L | 1404L | 4239 | 4010L | 2837 | 2856 | |
| 212.148 | 48560 | 2074 | 2074 | 2308 | 2092 | 694 | 2812 | 3862 | 4368 | 4237 | 4368 | 4326 | 2808 | 2439 | 91.6L | 92.87 | 161.7 | 4442 | 4330 | 4044 | 2892 | 2860 | |
| 213.148 | 48586 | 2699 | 2699 | 2319 | 2101 | 697 | 2826 | 3898 | 4404 | 4274 | 4404 | 4366 | 2319 | 2480 | 94.2 | 92.8 | 162.3 | 4457 | 4276 | 2858 | 2704 | 2112 | |
| 214.147 | 48217 | 2324 | 2324 | 2351 | 2111 | 698 | 2053 | 4023 | 4442 | 4311 | 4442 | 4403 | 2351 | 2460 | 94.6 | 92.8 | 162.0 | 4517 | 4406 | 4113 | 3013 | 2114 | |
| 215.147 | 46666 | 2849 | 2849 | 2542 | 2120 | 701 | 2885 | 4070 | 4479 | 4348 | 4479 | 4441 | 2342 | 2471 | 94.0 | 92.8 | 163.6 | 4449 | 4147 | 3039 | 2732 | 2118 | |
| 216.147 | 47044 | 2874 | 2874 | 2384 | 2130 | 703 | 2011 | 4106 | 4816 | 4816 | 4779 | 2854 | 2482 | 95.1 | 92.8 | 164.2 | 4593 | 4481 | 4182 | 3064 | 2776 | 2116 | |
| 217.146 | 47444 | 3000 | 3000 | 2385 | 2140 | 704 | 3036 | 4142 | 4824 | 4423 | 4824 | 4517 | 2885 | 2492 | 95.4 | 92.8 | 164.9 | 4651 | 4519 | 4117 | 3090 | 2801 | 2117 |
| 218.146 | 47812 | 3028 | 3028 | 2377 | 2148 | 708 | 3091 | 4179 | 4892 | 4461 | 4892 | 4558 | 2377 | 2503 | 95.8 | 92.8 | 165.5 | 4588 | 4527 | 4281 | 3116 | 2824 | 2118 |
| 219.146 | 48222 | 3051 | 3051 | 2389 | 2189 | 710 | 3096 | 4215 | 4929 | 4429 | 4929 | 4594 | 2389 | 2514 | 95.1 | 92.8 | 165.2 | 4708 | 4594 | 4297 | 3162 | 2880 | 2119 |
| 220.148 | 48692 | 3076 | 3076 | 2400 | 2188 | 712 | 3112 | 4252 | 4956 | 4537 | 4956 | 4638 | 2400T | 2524 | 96.4 | 92.8 | 166.0 | 4727 | 4634 | 4322 | 3198 | 2878 | 2200 |
| 221.148 | 48902 | 3102 | 3102 | 2412 | 2178 | 716 | 3137 | 4269 | 4976 | 4576 | 4976 | 4671 | 2137L | 4480 | 96.7 | 93.0 | 167.4 | 4786 | 4673 | 4357 | 3194 | 2890 | 2211 |
| 222.148 | 49442 | 3138 | 3138 | 2423 | 2187 | 717 | 3163 | 4326 | 4764 | 4614 | 4764 | 4710 | 2163 | 4818 | 97.0 | 93.0 | 168.1 | 4828 | 4712 | 4393 | 3220 | 2934 | 2222 |
| 223.144 | 49822 | 3184 | 3184 | 2435 | 2197 | 719 | 3198 | 4364 | 4783 | 4683 | 4783 | 4748 | 2168 | 4856 | 97.4 | 93.0 | 169.7 | 4884 | 4781 | 4428 | 3247 | 2940 | 2223 |
| 224.148 | 50222 | 3186 | 3186 | 2446 | 2206 | 721 | 3214 | 4401 | 4821 | 4691 | 4821 | 4766 | 2124 | 4956 | 97.7 | 93.0 | 170.4 | 4932 | 4790 | 4664 | 3273 | 2978 | 2224 |
| 225.148 | 50582 | 3206 | 3206 | 2480 | 2216 | 724 | 3240 | 4439 | 4860 | 4730 | 4860 | 4826 | 2400T | 4833 | 98.0 | 93.0 | 170.0 | 4942 | 4829 | 4600 | 3293 | 3000 | 2215 |
| 226.142 | 8103 | 3233 | 3233 | 2449 | 2238 | 726 | 3294 | 4477 | 4998 | 4770 | 4998 | 4867 | 2238 | 4972 | 98.3 | 93.0 | 170.4 | 4982 | 4889 | 4336 | 3327 | 3028 | 2246 |
| 227.142 | 8144 | 3289 | 3289 | 2481 | 2235 | 728 | 3292 | 4515 | 4938 | 4809 | 4938 | 4907 | 2222 | 4711 | 98.6 | 93.0 | 171.3 | 5022 | 4909 | 4372 | 3344 | 3011 | 2227 |
| 228.142 | 8186 | 3289 | 3289 | 2492 | 2244 | 730 | 3318 | 4553 | 4977 | 4848 | 4977 | 4937 | 2124 | 4956 | 97.0 | 93.0 | 172.4 | 5062 | 4949 | 4404 | 3373 | 3026 | 2228 |
| 229.141 | 8226 | 3213 | 3213 | 2504 | 2254 | 732 | 3344 | 4591 | 4987 | 5017 | 4987 | 5244 | 2124 | 4969 | 99.3 | 93.1 | 173.1 | 5092 | 4969 | 4446 | 3406 | 3102 | 2229 |
| 230.141 | 8267 | 3239 | 3239 | 2515 | 2295 | 735 | 3371 | 4629 | 5056 | 5056 | 5056 | 5237 | 2371 | 4928 | 99.6 | 93.1 | 173.2 | 5142 | 5029 | 4482 | 3435 | 3126 | 230 |
| 231.140 | 8300 | 3286 | 3286 | 2527 | 2273 | 737 | 3397 | 4668 | 5096 | 4987 | 5096 | 5397 | 2087 | 4966 | 99.9 | 93.1 | 173.8 | 5162 | 5049 | 4519 | 3462 | 3184 | 2311 |
| 232.140 | 8350 | 3293 | 3293 | 2538 | 2292 | 739 | 3424 | 4707 | 5136 | 5007 | 5136 | 5424 | 4907 | 100.2 | 93.1 | 174.8 | 5223 | 5110 | 4575 | 3489 | 3180 | 2312 | |
| 233.140 | 8382 | 3420 | 3420 | 2559 | 2292 | 752 | 3451 | 4746 | 5176 | 5048 | 5148 | 5451 | 4947 | 100.8 | 93.1 | 175.1 | 5264 | 5150 | 4642 | 3520 | 3212 | 2313 | |
| 234.138 | 8437 | 3457 | 3457 | 2581 | 2301 | 744 | 3477 | 4786 | 5216 | 5088 | 5216 | 5477 | 4987 | 100.8 | 93.1 | 176.8 | 5306 | 5181 | 4690 | 3544 | 3231 | 2314 | |
| 235.139 | 8475 | 3474 | 3474 | 2675 | 2311 | 746 | 3504 | 4824 | 5256 | 5129 | 5256 | 5504 | 5027 | 101.2 | 93.1 | 176.4 | 5346 | 5232 | 4667 | 3572 | 3219 | 2315 | |
| 236.139 | 8510 | 3501 | 3501 | 2584 | 2320 | 748 | 3531 | 4863 | 5297 | 5169 | 5297 | 5531 | 5067 | 101.8 | 93.2 | 177.0 | 5387 | 5279 | 4698 | 3600 | 3235 | 2316 | |
| 237.139 | 8560 | 3529 | 3529 | 2590 | 2330 | 751 | 3559 | 4903 | 5319 | 5210 | 5319 | 5559 | 5108 | 101.8 | 93.2 | 177.7 | 5426 | 5319 | 4793 | 3617 | 3206 | 2317 | |
| 238.139 | 8610 | 3557 | 3557 | 2607 | 2338 | 753 | 3581 | 4937 | 5351 | 5211 | 5351 | 5581 | 5147 | 101.8 | 93.2 | 178.4 | 5462 | 5350 | 4830 | 3656 | 3238 | 2318 | |
| 239.137 | 8645 | 3584 | 3584 | 2618 | 2349 | 755 | 3612 | 4963 | 5383 | 5212 | 5383 | 5612 | 5180 | 102.2 | 93.2 | 179.0 | 5511 | 5409 | 4864 | 3684 | 3268 | 2319 | |
| 240.137 | 8645 | 3612 | 3612 | 2650T | 2358 | 757 | 3640L | 5023 | 5534 | 5460L | 5347 | 5640L | 5230 | 102.8L | 93.2T | 179.6L | 5559 | 5459L | 5712 | 3592 | 2460 | | |

| IMPACT IN FT. | LOADING | ONE LANE LIVE LOAD (H20-516-44) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | |
|---------------|-----------|---------------------------------|------|-------|------|------|-------|--------------------------------------|------|-------|------|-------|------|-----------------------------|--------|--------|--------|-------|-------|--------------------------------------|------|------|------|-----|-----|--|
| | | POSITIVE MOMENTS (kip feet) | | | | | | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | SIMPLE SPAN SHEARS & REACTIONS (kip) | | | | | | |
| SPAN IN FT. | TRUCK (T) | FEM | FEM | FEM | FEM | SBM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | SBM | FEM | SBM | FEM | SBM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | |
| 24.1 | 135 5751L | 3840 | 3840 | 26247 | 2368 | 760 | 5688L | 5063 | 5575 | 5020L | 8479 | 5668L | 5271 | 105.1L | 53.2T | 180.2L | 5698L | 5461 | 5094L | 5740 | 5419 | | | | | |
| 24.2 | 136 5774L | 3868 | 3868 | 2683 | 2377 | 762 | 5698 | 5103 | 5843 | 5417 | 8443 | 5821 | 5638 | 6312 | 105.4 | 53.2 | 180.9 | 5637 | 5823 | 5133 | 5769 | 5446 | | | | |
| 24.3 | 136 5817L | 3896 | 3896 | 2685 | 2387 | 764 | 5723 | 5144 | 5888 | 5489 | 8585 | 5864 | 5723 | 5354 | 101.6 | 53.2 | 181.5 | 5678 | 5866 | 5171 | 5797 | 5473 | | | | |
| 24.4 | 136 5881L | 3724 | 3724 | 2678 | 2386 | 766 | 4751 | 5186 | 5626 | 5801 | 5626 | 5606 | 3781 | 5395 | 104.1 | 53.2 | 182.2 | 5722 | 5808 | 5210 | 5826 | 5401 | | | | |
| 24.5 | 135 5905L | 3783 | 3783 | 2686 | 2406 | 769 | 5779 | 5225 | 5656 | 5543 | 5868 | 5649 | 3779 | 5437 | 104.4 | 53.2 | 182.8 | 5784 | 5851 | 5248 | 5885 | 5326 | | | | |
| 24.6 | 135 5948L | 3781 | 3781 | 2700 | 2415 | 771 | 5827 | 5266 | 5710 | 5885 | 5710 | 5891 | 3807 | 5479 | 104.7 | 53.3 | 183.4 | 5807 | 5893 | 5287 | 5894 | 5356 | | | | |
| 24.7 | 134 5992L | 3810 | 3810 | 2711 | 2426 | 773 | 5895 | 5956 | 5753 | 5826 | 5753 | 5754 | 5935 | 5921 | 105.0 | 53.3 | 184.1 | 5850 | 5756 | 5326 | 5912 | 5893 | | | | |
| 24.8 | 134 6036L | 3838 | 3838 | 2723 | 2434 | 776 | 5893 | 5949 | 5793 | 5870 | 5798 | 5777 | 5853 | 5853 | 105.4 | 53.3 | 184.7 | 5893 | 5779 | 5366 | 5942 | 5611 | | | | |
| 24.9 | 134 6051L | 3857 | 3857 | 2734 | 2444 | 778 | 5890 | 5837 | 5713 | 5857 | 5851 | 5892 | 5805 | 106.7 | 53.3 | 185.4 | 5936 | 5823 | 5408 | 5971 | 5838 | | | | | |
| 25.0 | 133 6126L | 3896 | 3896 | 2746 | 2453 | 780 | 5920 | 5432 | 5890 | 5756 | 5880 | 5884 | 5920 | 5848 | 106.0 | 53.3 | 186.0 | 5886 | 5886 | 5444 | 4000 | 3887 | | | | |
| 25.1 | 133 6170L | 3926 | 3926 | 2757 | 2463 | 782 | 5949 | 5474 | 5823 | 5823 | 5908 | 5949 | 5891 | 106.3 | 53.3 | 186.6 | 5823 | 5891 | 5484 | 4029 | 3896 | | | | | |
| 25.2 | 133 6214L | 3954 | 3954 | 2769 | 2472 | 785 | 5977 | 5916 | 5896 | 5842 | 5896 | 5891 | 5977 | 5756 | 106.6 | 53.3 | 187.3 | 5807 | 5893 | 5524 | 4059 | 3728 | | | | |
| 25.3 | 132 6252L | 3982 | 3982 | 4000L | 3987 | 786 | 4006 | 5958 | 5929 | 5909 | 5929 | 5929 | 4006 | 5776 | 107.0 | 53.3 | 187.9 | 5811 | 5827 | 5564 | 4085 | 3781 | | | | |
| 25.4 | 132 6304L | 4012 | 4012 | 4028 | 3987 | 788 | 4018 | 5928 | 5928 | 5928 | 5928 | 5928 | 4018 | 5820 | 107.3 | 53.3 | 188.0 | 5815 | 5841 | 5604 | 4116 | 3780 | | | | |
| 25.5 | 132 6350L | 4042 | 4042 | 4056 | 3618 | 789 | 4056 | 5843 | 5843 | 5896 | 5873 | 5896 | 4053 | 5864 | 107.6 | 53.4L | 189.2 | 5192 | 5868 | 5644 | 4148 | 3806 | | | | |
| 25.6 | 131 6395L | 4071 | 4071 | 4093 | 4085 | 792 | 4074 | 5874 | 5823 | 5823 | 5908 | 5891 | 5891 | 106.8 | 53.3 | 186.6 | 5823 | 5891 | 5647 | 4176 | 3837 | | | | | |
| 25.7 | 131 6440L | 4101 | 4101 | 4115 | 4115 | 795 | 4122 | 5878 | 5893 | 5861 | 5863 | 5872 | 4122 | 5850 | 108.3 | 53.6 | 189.8 | 5886 | 5878 | 5728 | 4208 | 3865 | | | | |
| 25.8 | 131 6486L | 4131 | 4131 | 4151 | 4151 | 798 | 4148 | 5899 | 5815 | 5771 | 5827 | 5815 | 4127 | 5884 | 108.6 | 53.6 | 191.1 | 5832 | 5819 | 5765 | 4238 | 3894 | | | | |
| 25.9 | 130 6532L | 4150 | 4150 | 4180 | 4150 | 800 | 4158 | 5852 | 5852 | 5852 | 5852 | 5852 | 4150 | 5852 | 109.8 | 53.7 | 191.6 | 5877 | 5854 | 5806 | 4268 | 3923 | | | | |
| 26.0 | 130 6573L | 4190 | 4190 | 4210 | 4204 | 803 | 4204 | 5857 | 5857 | 5815 | 5894 | 5815 | 4207 | 6002 | 109.3 | 53.8 | 192.4 | 5822 | 5809 | 5847 | 4259 | 3882 | | | | |
| 26.1 | 130 6624L | 4220 | 4220 | 4239 | 4234 | 806 | 4238 | 5890 | 5890 | 5890 | 5890 | 5890 | 4238 | 6008 | 107.9 | 53.8 | 189.8 | 5843 | 5830 | 5884 | 4176 | 3837 | | | | |
| 26.2 | 129 6671L | 4251 | 4251 | 4269 | 4268 | 8012 | 4269 | 5944 | 6024 | 5828 | 5827 | 5827 | 4269 | 6171 | 109.8 | 54.0 | 193.7 | 6512 | 5939 | 5728 | 4208 | 3865 | | | | |
| 26.3 | 129 6717L | 4281 | 4281 | 4299 | 4299 | 8040 | 4299 | 5988 | 6046 | 5829 | 5829 | 5829 | 4299 | 6142 | 109.8 | 54.0 | 194.3 | 6556 | 5946 | 5771 | 4238 | 3894 | | | | |
| 26.4 | 129 6764L | 4311 | 4311 | 4329 | 4329 | 8066 | 4329 | 5923 | 6032 | 5893 | 5874 | 5874 | 4329 | 6240 | 110.5 | 54.1 | 195.0 | 6603 | 5890 | 6012 | 4261 | 4040 | | | | |
| 26.5 | 128 6811L | 4342 | 4342 | 4359 | 4356 | 8088 | 4359 | 6076 | 6119 | 5938 | 5938 | 5938 | 4359 | 6305 | 110.8 | 54.2 | 195.6 | 6649 | 5935 | 6054 | 4282 | 4093 | | | | |
| 26.6 | 128 6827L | 4372 | 4372 | 4399 | 4397 | 8027 | 4397 | 6120 | 6120 | 6083 | 6083 | 6083 | 4398 | 6360 | 111.1 | 54.2 | 196.3 | 6695 | 5982 | 6086 | 4343 | 4128 | | | | |
| 26.7 | 128 6861L | 4403 | 4403 | 4419 | 4417 | 8066 | 4419 | 6164 | 6164 | 6111 | 6126 | 6126 | 4419 | 6265 | 111.4 | 54.2 | 196.9 | 6741 | 6628 | 6137 | 4414 | 4158 | | | | |
| 26.8 | 127 6892L | 4434 | 4434 | 4449 | 4448 | 8081 | 4449 | 6203 | 5874 | 5874 | 5872 | 5872 | 5871 | 4449 | 6367 | 111.6 | 54.4 | 197.5 | 6787 | 6674 | 6173 | 4455 | 4158 | | | |
| 26.9 | 127 6930L | 4462 | 4462 | 4490 | 4489 | 8124 | 4490 | 6240 | 6240 | 6178 | 6178 | 6178 | 4490 | 6466 | 112.1 | 54.6 | 198.7 | 6877 | 6721 | 6222 | 4477 | 4218 | | | | |
| 27.0 | 127 7047L | 4485 | 4485 | 4510 | 4510 | 8144 | 4510 | 6299 | 6299 | 6195 | 6195 | 6195 | 4510 | 6532 | 112.4L | 54.6L | 199.8L | 6880L | 6767 | 6264L | 4498 | 4248 | | | | |

| ONE LANE LIVE LOAD (H20-S16-44) | | | | | | | | | | | |
|--|-----|------|------|------|------|------|------|------|------|-----|------|
| (IMPACT NOT INCLUDED) | | | | | | | | | | | |
| HINGE AT 1/5 POINT (0.200L) | | | | | | | | | | | |
| KAB = 0.251 CAB = 4.00 CBA = 0.250 CBA = 3.692 | | | | | | | | | | | |
| POSITIVE MOMENTS (kip feet) | | | | | | | | | | | |
| LOADING | | | | | | | | | | | |
| TRUCK (T) | | | | | | | | | | | |
| ALTERNATIVE(A) | | | | | | | | | | | |
| LANE (L) | | | | | | | | | | | |
| MAXIMUM POSITIVE MOMENTS | | | | | | | | | | | |
| SPWS | # | ft | ft | ft |
| 30 | 300 | 15.6 | 309A | 95A | 214A | 274A | 197A | 125A | 211A | 44A | 208A |
| 31 | 300 | 16.2 | 321 | 99 | 221 | 284 | 204 | 128 | 219 | 45 | 215 |
| 32 | 300 | 16.7 | 333 | 102 | 228 | 294 | 212 | 131 | 227 | 45 | 222 |
| 33 | 300 | 17.3 | 345 | 106 | 236 | 304 | 220 | 134 | 234 | 46 | 229 |
| 34 | 300 | 17.8 | 357 | 110 | 243 | 314 | 227 | 137 | 242 | 47 | 235 |
| 35 | 300 | 18.4 | 369 | 113 | 250 | 324 | 235 | 140 | 250 | 47 | 242 |
| 36 | 300 | 18.9 | 381 | 117 | 257 | 334A | 243A | 143A | 257 | 48 | 249 |
| 37 | 300 | 19.5 | 392 | 120 | 264 | 363T | 239T | 235T | 265 | 49 | 255 |
| 38 | 300 | 20.0 | 404 | 124 | 271 | 376 | 248 | 263 | 273 | 50 | 262 |
| 39 | 300 | 20.6 | 416 | 128 | 279 | 390 | 257 | 270 | 280 | 50 | 269 |
| 40 | 300 | 21.1 | 428 | 132 | 286 | 403 | 267 | 277 | 288 | 51 | 275 |
| 41 | 300 | 21.6 | 440 | 135 | 293 | 418 | 276 | 289 | 296 | 52 | 282 |
| 42 | 299 | 22.2 | 452 | 139 | 300 | 433 | 286 | 300 | 303 | 53 | 289 |
| 43 | 298 | 22.7 | 463 | 142 | 307 | 449 | 296 | 311 | 311 | 53 | 295 |
| 44 | 296 | 23.3 | 475 | 146 | 314 | 464 | 306 | 322 | 319 | 54 | 302 |
| 45 | 294 | 23.8 | 487 | 149 | 321 | 479 | 316 | 332 | 326 | 55 | 309 |
| 46 | 292 | 24.4 | 499A | 153A | 328A | 494 | 326 | 342 | 334 | 56 | 315 |
| 47 | 291 | 23.0 | 509T | 242T | 408T | 509 | 336 | 352 | 342 | 56 | 322 |
| 48 | 289 | 25.1 | 574 | 223 | 421 | 524 | 346 | 361 | 349 | 57 | 328 |
| 49 | 287 | 25.6 | 592 | 228 | 434 | 539 | 357 | 370 | 357 | 58 | 335 |
| 50 | 286 | 26.2 | 610 | 232 | 448 | 554 | 367 | 379 | 365 | 59 | 341 |
| 51 | 284 | 26.7 | 628 | 238 | 461 | 570 | 378 | 388 | 372 | 59 | 348 |
| 52 | 282 | 27.2 | 646 | 243 | 474 | 585 | 388 | 396 | 380 | 60 | 354 |
| 53 | 281 | 27.8 | 654 | 248 | 487 | 600 | 399 | 404 | 388 | 61 | 361 |
| 54 | 279 | 28.3 | 662 | 254 | 500 | 615 | 409 | 412 | 395 | 62 | 367 |
| 55 | 278 | 28.8 | 700 | 259 | 513 | 630 | 420 | 420 | 403 | 63 | 374 |
| 56 | 276 | 29.3 | 718 | 265 | 525 | 645 | 431 | 427 | 411 | 63 | 380 |
| 57 | 275 | 29.9 | 735 | 269 | 538 | 660 | 441 | 435 | 419 | 64 | 387 |
| 58 | 273 | 30.4 | 753 | 274 | 550 | 675 | 452 | 442 | 426 | 65 | 393 |
| 59 | 272 | 31.0 | 771T | 280T | 563T | 690T | 463T | 449T | 434A | 66A | 400A |

| NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | |
|-----------------------------|-----|------|------|------|------|------|------|------|------|-----|------|
| LOADING | | | | | | | | | | | |
| TRUCK (T) | | | | | | | | | | | |
| ALTERNATIVE(A) | | | | | | | | | | | |
| LANE (L) | | | | | | | | | | | |
| MAXIMUM NEGATIVE MOMENTS | | | | | | | | | | | |
| SPWS | # | ft | ft | ft |
| 30 | 300 | 15.6 | 309A | 95A | 214A | 274A | 197A | 125A | 211A | 44A | 208A |
| 31 | 300 | 16.2 | 321 | 99 | 221 | 284 | 204 | 128 | 219 | 45 | 215 |
| 32 | 300 | 16.7 | 333 | 102 | 228 | 294 | 212 | 131 | 227 | 45 | 222 |
| 33 | 300 | 17.3 | 345 | 106 | 236 | 304 | 220 | 134 | 234 | 46 | 229 |
| 34 | 300 | 17.8 | 357 | 110 | 243 | 314 | 227 | 137 | 242 | 47 | 235 |
| 35 | 300 | 18.4 | 369 | 113 | 250 | 324 | 235 | 140 | 250 | 47 | 242 |
| 36 | 300 | 18.9 | 381 | 117 | 257 | 334A | 243A | 143A | 257 | 48 | 249 |
| 37 | 300 | 19.5 | 392 | 120 | 264 | 363T | 239T | 235T | 265 | 49 | 255 |
| 38 | 300 | 20.0 | 404 | 124 | 271 | 376 | 248 | 263 | 273 | 50 | 262 |
| 39 | 300 | 20.6 | 416 | 128 | 279 | 390 | 257 | 270 | 280 | 50 | 269 |
| 40 | 300 | 21.1 | 428 | 132 | 286 | 403 | 267 | 277 | 288 | 51 | 275 |
| 41 | 300 | 21.6 | 440 | 135 | 293 | 418 | 276 | 289 | 296 | 52 | 282 |
| 42 | 299 | 22.2 | 452 | 139 | 300 | 433 | 286 | 300 | 303 | 53 | 289 |
| 43 | 298 | 22.7 | 463 | 142 | 307 | 449 | 296 | 311 | 311 | 53 | 295 |
| 44 | 296 | 23.3 | 475 | 146 | 314 | 464 | 306 | 322 | 319 | 54 | 302 |
| 45 | 294 | 23.8 | 487 | 149 | 321 | 479 | 316 | 332 | 326 | 55 | 309 |
| 46 | 292 | 24.4 | 499A | 153A | 328A | 494 | 326 | 342 | 334 | 56 | 315 |
| 47 | 291 | 23.0 | 509T | 242T | 408T | 509 | 336 | 352 | 342 | 56 | 322 |
| 48 | 289 | 25.1 | 574 | 223 | 421 | 524 | 346 | 361 | 349 | 57 | 328 |
| 49 | 287 | 25.6 | 592 | 228 | 434 | 539 | 357 | 370 | 357 | 58 | 335 |
| 50 | 286 | 26.2 | 610 | 232 | 448 | 554 | 367 | 379 | 365 | 59 | 341 |
| 51 | 284 | 26.7 | 628 | 238 | 461 | 570 | 378 | 388 | 372 | 59 | 348 |
| 52 | 282 | 27.2 | 646 | 243 | 474 | 585 | 388 | 396 | 380 | 60 | 354 |
| 53 | 281 | 27.8 | 654 | 248 | 487 | 600 | 399 | 404 | 388 | 61 | 361 |
| 54 | 279 | 28.3 | 662 | 254 | 500 | 615 | 409 | 412 | 395 | 62 | 367 |
| 55 | 278 | 28.8 | 700 | 259 | 513 | 630 | 420 | 420 | 403 | 63 | 374 |
| 56 | 276 | 29.3 | 718 | 265 | 525 | 645 | 431 | 427 | 411 | 63 | 380 |
| 57 | 275 | 29.9 | 735 | 269 | 538 | 660 | 441 | 435 | 419 | 64 | 387 |
| 58 | 273 | 30.4 | 753 | 274 | 550 | 675 | 452 | 442 | 426 | 65 | 393 |
| 59 | 272 | 31.0 | 771T | 280T | 563T | 690T | 463T | 449T | 434A | 66A | 400A |

| MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | | | |
|-------------------------------|-----|------|------|------|------|------|------|------|------|-----|------|
| LOADING | | | | | | | | | | | |
| TRUCK (T) | | | | | | | | | | | |
| ALTERNATIVE(A) | | | | | | | | | | | |
| LANE (L) | | | | | | | | | | | |
| MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | | | |
| SPWS | # | ft | ft | ft |
| 30 | 300 | 15.6 | 309A | 95A | 214A | 274A | 197A | 125A | 211A | 44A | 208A |
| 31 | 300 | 16.2 | 321 | 99 | 221 | 284 | 204 | 128 | 219 | 45 | 215 |
| 32 | 300 | 16.7 | 333 | 102 | 228 | 294 | 212 | 131 | 227 | 45 | 222 |
| 33 | 300 | 17.3 | 345 | 106 | 236 | 304 | 220 | 134 | 234 | 46 | 229 |
| 34 | 300 | 17.8 | 357 | 110 | 243 | 314 | 227 | 137 | 242 | 47 | 235 |
| 35 | 300 | 18.4 | 369 | 113 | 250 | 324 | 235 | 140 | 250 | 47 | 242 |
| 36 | 300 | 18.9 | 381 | 117 | 257 | 334A | 243A | 143A | 257 | 48 | 249 |
| 37 | 300 | 19.5 | 392 | 120 | 264 | 363T | 239T | 235T | 265 | 49 | 255 |
| 38 | 300 | 20.0 | 404 | 124 | 271 | 376 | 248 | 263 | 273 | 50 | 262 |
| 39 | 300 | 20.6 | 416 | 128 | 279 | 390 | 257 | 270 | 280 | 50 | 269 |
| 40 | 300 | 21.1 | 428 | 132 | 286 | 403 | 267 | 277 | 288 | 51 | 275 |
| 41 | 300 | 21.6 | 440 | 135 | 293 | 418 | 276 | 289 | 296 | 52 | 282 |
| 42 | 299 | 22.2 | 452 | 139 | 300 | 433 | 286 | 300 | 303 | 53 | 289 |
| 43 | 298 | 22.7 | 463 | 142 | 307 | 449 | 296 | 311 | 311 | 53 | 295 |
| 44 | 296 | 23.3 | 475 | 146 | 314 | 464 | 306 | 322 | 319 | 54 | 302 |
| 45 | 294 | 23.8 | 487 | 149 | 321 | 479 | 316 | 332 | 326 | 55 | 309 |
| 46 | 292 | 24.4 | 499A | 153A | 328A | 494 | 326 | 342 | 334 | 56 | 315 |
| 47 | 291 | 23.0 | 509T | 242T | 408T | 509 | 336 | 352 | 342 | 56 | 322 |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/5 POINT (0.200L)

KAB= 0.231

CBA = 4.00

KBA = 3.692

POSITIVE MOMENTS (kip feet)

| LOADING | POSITIVE MOMENTS (kip feet) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | |
|-----------------|-----------------------------|-------------|------------|------------|----------------------|------------|------------|------------|----------------------|------------|------------|------------|-----------------------------|------------|------------|------------|-----------------------------|------------|------------|------------|-----------------------------|------------|------------|------------|
| | MAXIMUM POSITIVE MOMENTS | | | | MOMENTS AT 0.3 POINT | | | | MOMENTS AT 0.6 POINT | | | | MAXIMUM NEGATIVE MOMENTS @A | | | | MAXIMUM NEGATIVE MOMENTS @B | | | | MAXIMUM NEGATIVE MOMENTS @A | | | |
| qL | 5BM @ qL | FEM @ A | FEM @ B | q0.3L | FEM @ A | FEM @ B | FEM @ D | q0.6L | FEM @ A | FEM @ B | FEM @ D | q0.6L | FEM @ A | FEM @ B | FEM @ C | q0.6L | FEM @ A | FEM @ B | FEM @ C | q0.6L | FEM @ A | FEM @ B | FEM @ C | |
| TRUCK (A) | 0.64 | W: 0.64 | K: Ft | 0.3L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | |
| ALTERNATIVE (A) | 0.64 | W: 0.64 | K: Ft | 0.3L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | |
| LANE (L) | 0.64 | W: 0.64 | K: Ft | 0.3L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | 0.6L | W: 0.64 | K: Ft | W: 0.64 | |
| L | MAXIMUM POSITIVE MOMENTS | 5BM @ qL | FEM @ A | FEM @ B | 0.3L | FEM @ A | FEM @ B | FEM @ D | q0.3L | FEM @ A | FEM @ B | FEM @ D | q0.6L | FEM @ A | FEM @ B | FEM @ C | q0.6L | FEM @ A | FEM @ B | FEM @ C | q0.6L | FEM @ A | FEM @ B | FEM @ C |
| 60 | -270 | 31.5 | 789T | 285T | 700T | 474T | 456T | 557T | 240T | 576T | 617T | 317T | 394L | 208L | 504L | 232L | 364L | 13.02 | 568T | 258T | 577T | 60 | | |
| 61 | -269 | 32.0 | 807 | 291 | 587 | 721 | 485 | 463 | 588 | 240 | 589 | 630 | 320 | 403 | 215 | 517 | 239 | 374 | 13.36 | 604 | 261 | 590 | 61 | |
| 62 | -267 | 32.6 | 824 | 295 | 600 | 736 | 496 | 470 | 580 | 241 | 601 | 644 | 323 | 413 | 221 | 530 | 246 | 383 | 13.70 | 620 | 264 | 603 | 62 | |
| 63 | -266 | 33.1 | 842 | 301 | 612 | 751 | 507 | 477 | 591 | 241 | 613 | 658 | 325 | 423 | 228 | 543 | 254 | 393 | 13.99 | 634 | 266 | 616 | 63 | |
| 64 | -265 | 33.7 | 860 | 306 | 624 | 766 | 518 | 483 | 603 | 242 | 626 | 672 | 328 | 433 | 235 | 557 | 261 | 403 | 14.34 | 650 | 269 | 628 | 64 | |
| 65 | -263 | 34.2 | 876 | 312 | 636 | 781 | 529 | 490 | 614 | 243 | 636 | 685 | 330 | 443 | 243 | 570 | 268 | 412 | 14.62 | 665 | 271 | 641 | 65 | |
| 66 | -262 | 34.7 | 896 | 317 | 648 | 796 | 540 | 496 | 626 | 243 | 650 | 699 | 332 | 453 | 250 | 583 | 276 | 422 | 14.98 | 681 | 274 | 653 | 66 | |
| 67 | -260 | 35.2 | 914 | 323 | 659 | 811 | 551 | 502 | 637 | 244 | 662 | 713 | 335 | 464 | 257 | 597 | 283 | 432 | 15.28 | 696 | 277 | 666 | 67 | |
| 68 | -259 | 35.8 | 931 | 327 | 571 | 827 | 562 | 509 | 649 | 244 | 674 | 727 | 337 | 474 | 266 | 611 | 291 | 442 | 15.57 | 711 | 279 | 678 | 68 | |
| 69 | -258 | 36.4 | 949 | 333 | 633 | 842 | 573 | 515 | 660 | 245 | 686 | 741 | 339 | 484 | 273 | 625 | 299 | 453 | 15.94 | 727 | 282 | 691 | 69 | |
| 70 | -256 | 36.9 | 957 | 338 | 693 | 857 | 584 | 521 | 672 | 246 | 698 | 755 | 341 | 495 | 280 | 639 | 307 | 463 | 16.24 | 742 | 285 | 703 | 70 | |
| 71 | -255 | 37.4 | 965 | 344 | 707 | 872 | 598 | 527 | 684 | 248 | 704 | 769 | 343 | 505 | 286 | 653 | 314 | 473 | 16.54 | 757 | 287 | 716 | 71 | |
| 72 | -254 | 37.9 | 1003 | 349 | 718 | 887 | 606 | 533 | 695 | 247 | 722 | 782 | 345 | 516 | 296 | 666 | 323 | 484 | 16.92 | 774 | 291 | 728 | 72 | |
| 73 | -253 | 38.5 | 1021 | 355 | 730 | 902 | 617 | 539 | 707 | 247 | 739 | 796 | 347 | 527 | 304 | 682 | 331 | 495 | 17.23 | 789 | 293 | 740 | 73 | |
| 74 | -251 | 39.1 | 1038 | 359 | 742 | 917 | 628 | 544 | 718 | 248 | 748 | 810 | 349 | 536 | 312 | 697 | 339 | 505 | 17.54 | 804 | 296 | 753 | 74 | |
| 75 | -250 | 39.6 | 1056 | 365 | 753 | 932 | 639 | 550 | 730 | 249 | 757 | 824 | 351 | 549 | 321 | 712 | 347 | 516 | 17.85 | 819 | 298 | 765 | 75 | |
| 76 | -249 | 40.1 | 1074 | 371 | 768 | 948 | 651 | 556 | 741 | 250 | 766 | 838 | 363 | 560 | 329 | 727 | 356 | 527 | 18.16 | 835 | 301 | 777 | 76 | |
| 77 | -248 | 40.7 | 1092 | 376 | 776 | 963 | 662 | 562 | 753 | 250 | 760 | 852 | 365 | 572 | 336 | 742 | 364 | 536 | 18.56 | 852 | 305 | 789 | 77 | |
| 78 | -246 | 41.2 | 1110 | 382 | 788 | 978 | 673 | 567 | 764 | 251 | 791 | 866 | 366 | 583 | 346 | 757 | 373 | 550 | 18.86 | 868 | 307 | 802 | 78 | |
| 79 | -245 | 41.7 | 1128 | 387 | 799 | 993 | 684 | 573 | 776 | 252 | 803 | 880 | 368 | 594 | 355 | 773 | 382 | 561 | 19.20 | 883 | 310 | 814 | 79 | |
| 80 | -244 | 42.3 | 1145 | 392 | 811 | 1008 | 695 | 578 | 787 | 252 | 814 | 894 | 369 | 606 | 364 | 788 | 391 | 572 | 19.52 | 899 | 313 | 826 | 80 | |
| 81 | -243 | 42.8 | 1163 | 397 | 822 | 1023 | 707 | 584 | 799 | 253 | 820 | 908 | 361 | 618 | 373 | 804 | 400 | 584 | 19.84 | 914 | 316 | 838 | 81 | |
| 82 | -241 | 43.4 | 1181 | 403 | 834 | 1038 | 718 | 589 | 810 | 254 | 837 | 922 | 363 | 629 | 382 | 820 | 409 | 595 | 20.17 | 930 | 318 | 850 | 82 | |
| 83 | -240 | 43.9 | 1199 | 408 | 846 | 1053 | 729 | 595 | 822 | 255 | 849 | 936 | 365 | 641 | 391 | 836 | 418 | 607 | 20.50 | 945 | 321 | 863 | 83 | |
| 84 | -239 | 44.4 | 1217 | 414 | 856 | 1068 | 740 | 600 | 833 | 255 | 860 | 950 | 366 | 653 | 400 | 852 | 427 | 619 | 20.83 | 961 | 324 | 875 | 84 | |
| 85 | -238 | 45.0 | 1235 | 420 | 867 | 1084 | 752 | 605 | 845 | 256 | 871 | 964 | 368 | 666 | 410 | 866 | 437 | 631 | 21.16 | 977 | 327 | 887 | 85 | |
| 86 | -237 | 45.6 | 1252 | 424 | 879 | 1099 | 763 | 611 | 856 | 257 | 882 | 978 | 369 | 678 | 419 | 885 | 446 | 643 | 21.50 | 993 | 330 | 899 | 86 | |
| 87 | -236 | 46.1 | 1270 | 429 | 890 | 1114 | 774 | 616 | 868 | 258 | 894 | 992 | 371 | 690 | 420 | 901 | 456 | 656 | 21.84 | 1009 | 333 | 911 | 87 | |
| 88 | -235 | 46.6 | 1288 | 435 | 901 | 1120 | 785 | 621 | 879 | 259 | 905 | 1006 | 372 | 702 | 436 | 916 | 465 | 668 | 22.18 | 1025 | 336 | 923 | 88 | |
| 89 | -234 | 47.2 | 1306T | 441T | 913T | 1144T | 797T | 626T | 897T | 259T | 916T | 1020T | 374T | 715L | 448L | 935L | 475L | 680L | 22.52 | 1041T | 340T | 935T | 89 | |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/5 POINT (0.200L)

KAB = 0.231 CAB = 4.00

KBA = 3.692 CBA = 0.250

NEGATIVE MOMENTS (kip feet)

| SPAN IN | IMPACT FOR TRUCK | ALTERNATIVE | LANE | POSITIVE MOMENTS (kip feet) | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | |
|------------|------------------------|-------------|-------|-----------------------------|-------|-------|-------|------|-------|-----------------------------|-------|-------|------|-------|------|
| | | | | OL | 0.3L | 0.8L | 1.2L | 1.6L | 2.1L | 2.6L | 3.1L | 3.6L | 4.1L | 4.6L | 5.1L |
| 90 | 233 | 47.7 | 1324T | 446T | 924T | 1159T | 808T | 632T | 927T | 1034T | 375T | 727L | 458L | 952L | 485L |
| 91 | 231 | 48.2 | 1342 | 452 | 935 | 1174 | 819 | 637 | 914 | 261 | 938 | 377 | 740 | 468 | 969 |
| 92 | 230 | 48.8 | 1360 | 458 | 946 | 1189 | 831 | 642 | 925 | 262 | 949 | 1022 | 378 | 753 | 478 |
| 93 | 229 | 49.4 | 1377 | 462 | 958 | 1205 | 842 | 647 | 937 | 263 | 960 | 1056 | 379 | 766 | 488 |
| 94 | 228 | 49.9 | 1395 | 467 | 969 | 1220 | 853 | 652 | 948 | 264 | 971 | 1080 | 381 | 779 | 499 |
| 95 | 227 | 50.4 | 1413 | 473 | 980 | 1235 | 855 | 657 | 960 | 264 | 982 | 1104 | 382 | 792 | 509 |
| 96 | 226 | 51.0 | 1431 | 479 | 991 | 1250 | 876 | 662 | 972 | 265 | 993 | 1119 | 384 | 805 | 520 |
| 97 | 225 | 51.5 | 1449 | 484 | 1002 | 1265 | 887 | 667 | 983 | 266 | 1004 | 1133 | 385 | 818 | 531 |
| 98 | 224 | 52.0 | 1467 | 490 | 1013 | 1280 | 899 | 672 | 995 | 267 | 1015 | 1147 | 386 | 832 | 541 |
| 99 | 223 | 52.6 | 1485 | 496 | 1024 | 1295 | 910 | 677 | 1006 | 268 | 1026 | 1161 | 388 | 845 | 552 |
| 100 | 222 | 53.1 | 1503 | 502 | 1035 | 1310 | 921 | 682 | 1018 | 269 | 1037 | 1175 | 389 | 859 | 563 |
| 101 | 221 | 53.7 | 1520 | 505 | 1047 | 1326 | 933 | 687 | 1029 | 270 | 1048 | 1189 | 390 | 872 | 574 |
| 102 | 220 | 54.3 | 1538 | 511 | 1058 | 1341 | 944 | 692 | 1041 | 271 | 1059 | 1203 | 391 | 886 | 586 |
| 103 | 219 | 54.8 | 1556 | 517 | 1066 | 1356 | 956 | 697 | 1052 | 271 | 1069 | 1217 | 393 | 900 | 597 |
| 104 | 218 | 55.3 | 1574 | 522 | 1079 | 1371 | 967 | 702 | 1064 | 272 | 1080 | 1231 | 394 | 914 | 608 |
| 105 | 217 | 55.9 | 1592 | 528 | 1090 | 1386 | 978 | 707 | 1075 | 273 | 1091 | 1245 | 395 | 928 | 620 |
| 106 | 216 | 56.4 | 1609 | 534 | 1101 | 1401 | 990 | 712 | 1087 | 274 | 1102 | 1259 | 396 | 942 | 631 |
| 107 | 216 | 56.9 | 1627 | 539 | 1112 | 1416 | 1001 | 717 | 1098 | 275 | 1112 | 1273 | 398 | 957 | 643 |
| 108 | 215 | 57.5 | 1645 | 545 | 1123 | 1431 | 1012 | 721 | 1110 | 276 | 1123 | 1287 | 399 | 971 | 655 |
| 109 | 214 | 58.1 | 1662 | 549 | 1135 | 1446 | 1024 | 726 | 1121 | 277 | 1134 | 1302 | 400 | 985 | 667 |
| 110 | 213 | 58.6 | 1680 | 554 | 1146 | 1462 | 1035 | 731 | 1133 | 278 | 1145 | 1316 | 401 | 1000 | 679 |
| 111 | 212 | 59.2 | 1698 | 560 | 1156 | 1477 | 1047 | 736 | 1144 | 279 | 1155 | 1330 | 402 | 1015 | 691 |
| 112 | 211 | 59.7 | 1716 | 566 | 1167 | 1492 | 1058 | 741 | 1156 | 280 | 1166 | 1344 | 404 | 1029 | 704 |
| 113 | 210 | 60.2 | 1734 | 571 | 1178 | 1507 | 1069 | 745 | 1167 | 281 | 1176 | 1358 | 405 | 1044 | 716 |
| 114 | 209 | 60.8 | 1752 | 577 | 1189 | 1522 | 1081 | 750 | 1179 | 282 | 1187 | 1372 | 406 | 1059 | 729 |
| 115 | 208 | 61.3 | 1770 | 583 | 1200 | 1537 | 1092 | 755 | 1190 | 283 | 1198 | 1396 | 407 | 1074 | 741 |
| 116 | 207 | 61.8 | 1788 | 588 | 1211 | 1552 | 1104 | 760 | 1202 | 284 | 1208 | 1400 | 408 | 1090 | 754 |
| 117 | 207 | 62.4 | 1806 | 594 | 1221 | 1567 | 1115 | 764 | 1213 | 285 | 1219 | 1414 | 409 | 1105 | 767 |
| 118 | 206 | 62.9 | 1824 | 600 | 1232 | 1583 | 1127 | 769 | 1225 | 285 | 1229 | 1429 | 411 | 1120 | 780 |
| 119 | 205 | 63.5 | 1841T | 603T | 1244T | 1598T | 1138T | 774T | 1236T | 286T | 1240T | 1433T | 412T | 1136L | 793L |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/5 POINT (0.200L)

KAB = 0.281 CAB = 4.00

KBA = 3.692 CDA = 0.250

POSITIVE MOMENTS (kip feet)

| LOADING | POSITIVE MOMENTS (kip feet) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | | | |
|-----------------|-----------------------------|-------------------|------------------|------------------|--------------------------------|---------------------|------------------|------------------|--------------------------------|---------------------|------------------|------------------|--------------------------------|---------------------|------------------|------------------|------------------------------------|------------------|------------------|------------------------------------|------------------|------------------|--------|-----|----------------|--|--|
| | ALTERNATIVE(A) | | | | ALTERNATIVE(B) | | | | ALTERNATIVE(C) | | | | ALTERNATIVE(D) | | | | ALTERNATIVE(E) | | | | ALTERNATIVE(F) | | | | ALTERNATIVE(G) | | |
| Lane (L) | MAXIMUM FEM @ L ft | SBM @ QL ft | FEM @ A ft | FEM @ B ft | MAXIMUM FEM @ 0.3L ft | SBM @ 0.3L ft | FEM @ A ft | FEM @ B ft | MAXIMUM FEM @ 0.6L ft | SBM @ 0.6L ft | FEM @ A ft | FEM @ B ft | MAXIMUM FEM @ 0.8L ft | SBM @ 0.8L ft | FEM @ A ft | FEM @ B ft | MAXIMUM NEGATIVE MOMENTS @ A | FEM @ A ft | FEM @ B ft | MAXIMUM NEGATIVE MOMENTS @ B | FEM @ A ft | FEM @ B ft | | | | | |
| TRUCK (T) | 120 | 64.1 | 1859T | 609T | 1255T | 1613T | 1149T | 779T | 1248T | 287T | 1250T | 1457T | 413T | 1151L | 806L | 828L | 1119L | 32.6L | 1535T | 43.4T | 13.02T | 120 | | | | | |
| ALTERNATIVE(A) | 121 | 203 | 64.6 | 1877 | 615 | 1626 | 1628 | 1161 | 783 | 1260 | 288 | 1261 | 1471 | 414 | 1167 | 819 | 1551 | 1134 | 33.2T | 1552 | 43.6 | 13.14 | 121 | | | | |
| ALTERNATIVE(B) | 122 | 202 | 65.1 | 1894 | 620 | 1726 | 1643 | 1172 | 788 | 1271 | 289 | 1271 | 1485 | 415 | 1183 | 833 | 1573 | 1150 | 33.6T | 1567 | 44.0 | 13.26 | 122 | | | | |
| ALTERNATIVE(C) | 123 | 202 | 65.7 | 1912 | 626 | 1887 | 1658 | 1184 | 793 | 1283 | 290 | 1282 | 1499 | 416 | 1199 | 846 | 1594 | 1167 | 33.9T | 1584 | 44.5 | 13.37 | 123 | | | | |
| ALTERNATIVE(D) | 124 | 201 | 66.2 | 1930 | 632 | 1928 | 1673 | 1195 | 797 | 1294 | 291 | 1292 | 1513 | 417 | 1215 | 860 | 1616 | 1183 | 34.2T | 1599 | 44.7 | 13.49 | 124 | | | | |
| ALTERNATIVE(E) | 125 | 200 | 66.7 | 1948 | 637 | 1939 | 1688 | 1207 | 802 | 1306 | 292 | 1303 | 1527 | 418 | 1231 | 873 | 1636 | 1194 | 34.6T | 1616 | 45.1 | 13.61 | 125 | | | | |
| ALTERNATIVE(F) | 126 | 199 | 67.3 | 1966 | 643 | 1919 | 1704 | 1218 | 807 | 1317 | 293 | 1313 | 1542 | 419 | 1247 | 887 | 1661 | 1215 | 34.9T | 1631 | 45.3 | 13.72 | 126 | | | | |
| ALTERNATIVE(G) | 127 | 198 | 67.8 | 1984 | 649 | 1930 | 1734 | 1241 | 816 | 1329 | 294 | 1323 | 1566 | 420 | 1264 | 901 | 1683 | 921 | 1232 | 35.3T | 1649 | 45.7 | 13.84 | 127 | | | |
| ALTERNATIVE(H) | 128 | 198 | 68.4 | 2002 | 654 | 1941 | 1734 | 1241 | 816 | 1340 | 295 | 1334 | 1570 | 422 | 1280 | 918 | 1705 | 935 | 1249 | 35.5T | 1663 | 46.0 | 13.96 | 128 | | | |
| ALTERNATIVE(I) | 129 | 197 | 68.9 | 2020 | 660 | 1951 | 1749 | 1252 | 821 | 1352 | 296 | 1344 | 1584 | 423 | 1296 | 929 | 1728 | 949 | 1265 | 35.9T | 1681 | 46.4 | 14.07 | 129 | | | |
| ALTERNATIVE(J) | 130 | 196 | 69.5 | 2037 | 663 | 1964 | 1764 | 1264 | 828 | 1363 | 297 | 1365 | 1598 | 424 | 1313 | 944 | 1751 | 969 | 1282 | 36.2T | 1698 | 46.6 | 14.19 | 130 | | | |
| ALTERNATIVE(K) | 131 | 195 | 70.1 | 2055 | 669 | 1974 | 1776 | 1276 | 830 | 1375 | 298 | 1366 | 1612 | 425 | 1330 | 959 | 1774 | 977 | 1299 | 36.6T | 1713 | 47.1 | 14.31 | 131 | | | |
| ALTERNATIVE(L) | 132 | 195 | 70.6 | 2073 | 675 | 1985 | 1794 | 1287 | 834 | 1386 | 299 | 1375 | 1626 | 426 | 1347 | 972 | 1797 | 991 | 1316 | 36.9T | 1726 | 47.3 | 14.42 | 132 | | | |
| ALTERNATIVE(M) | 133 | 194 | 71.1 | 2091 | 680 | 1996 | 1809 | 1298 | 839 | 1398 | 300 | 1386 | 1640 | 427 | 1364 | 987 | 1820 | 1005 | 1333 | 37.3T | 1746 | 47.7 | 14.54 | 133 | | | |
| ALTERNATIVE(N) | 134 | 193 | 71.7 | 2108 | 686 | 1996 | 1824 | 1310 | 844 | 1406 | 301 | 1396 | 1655 | 428 | 1381 | 1002 | 1843 | 1029 | 1351 | 37.6T | 1760 | 47.9 | 14.66 | 134 | | | |
| ALTERNATIVE(O) | 135 | 192 | 72.2 | 2126 | 692 | 1997 | 1840 | 1321 | 858 | 1421 | 302 | 1406 | 1669 | 429 | 1398 | 1016 | 1867 | 1034 | 1368 | 38.0T | 1779 | 48.4 | 14.77 | 135 | | | |
| ALTERNATIVE(P) | 136 | 192 | 72.8 | 2144 | 697 | 1992 | 1848 | 1332 | 853 | 1432 | 303 | 1417 | 1683 | 430 | 1415 | 1031 | 1891 | 1048 | 1386 | 38.3T | 1793 | 48.6 | 14.89 | 136 | | | |
| ALTERNATIVE(Q) | 137 | 191 | 73.3 | 2162 | 703 | 1948 | 1850 | 1344 | 857 | 1444 | 304 | 1427 | 1697 | 431 | 1432 | 1040 | 1914 | 1063 | 1403 | 38.6T | 1808 | 48.8 | 15.01 | 137 | | | |
| ALTERNATIVE(R) | 138 | 190 | 73.8 | 2180 | 709 | 1949 | 1855 | 1345 | 862 | 1449 | 306 | 1437 | 1711 | 432 | 1450 | 1061 | 1938 | 1078 | 1421 | 39.0T | 1826 | 49.3 | 15.12 | 138 | | | |
| ALTERNATIVE(S) | 139 | 189 | 74.4 | 2198 | 714 | 1960 | 1867 | 1367 | 866 | 1467 | 307 | 1447 | 1725 | 433 | 1467 | 1077 | 1963 | 1093 | 1439 | 39.3T | 1841 | 49.5 | 15.24 | 139 | | | |
| ALTERNATIVE(T) | 140 | 189 | 74.9 | 2216 | 720 | 1970 | 1891 | 1376 | 871 | 1478 | 308 | 1456 | 1739 | 434 | 1485 | 1092 | 1987 | 1108 | 1457 | 39.7T | 1859 | 50.0 | 15.35 | 140 | | | |
| ALTERNATIVE(U) | 141 | 188 | 75.4 | 2234 | 726 | 1981 | 1900 | 1390 | 876 | 1490 | 309 | 1466 | 1754 | 435 | 1503 | 1107 | 2011 | 1123 | 1475 | 40.0T | 1874 | 50.2 | 15.47 | 141 | | | |
| ALTERNATIVE(V) | 142 | 187 | 76.1 | 2251 | 729 | 1993 | 1945 | 1401 | 880 | 1501 | 310 | 1478 | 1768 | 436 | 1520 | 1123 | 2036 | 1136 | 1493 | 40.3T | 1888 | 50.4 | 15.59 | 142 | | | |
| ALTERNATIVE(W) | 143 | 187 | 76.6 | 2269 | 734 | 1960 | 1900 | 1413 | 885 | 1513 | 311 | 1486 | 1782 | 437 | 1538 | 1139 | 2050 | 1153 | 1511 | 40.7T | 1907 | 50.9 | 15.70 | 143 | | | |
| ALTERNATIVE(X) | 144 | 186 | 77.2 | 2286 | 740 | 1916 | 1956 | 1424 | 889 | 1524 | 312 | 1499 | 1795 | 438 | 1556 | 1154 | 2085 | 1168 | 1529 | 41.0T | 1921 | 51.1 | 15.82 | 144 | | | |
| ALTERNATIVE(Y) | 145 | 185 | 77.7 | 2304 | 746 | 1926 | 1991 | 1436 | 894 | 1536 | 313 | 1510 | 1810 | 439 | 1574 | 1170 | 2110 | 1184 | 1548 | 41.4T | 1940 | 51.5 | 15.93 | 145 | | | |
| ALTERNATIVE(Z) | 146 | 185 | 78.3 | 2322 | 751 | 1936 | 2006 | 1447 | 898 | 1546 | 314 | 1519 | 1824 | 440 | 1593 | 1186 | 2135 | 1199 | 1567 | 41.7T | 1954 | 51.8 | 16.05 | 146 | | | |
| ALTERNATIVE(AA) | 147 | 184 | 78.8 | 2340 | 757 | 1946 | 2021 | 1456 | 903 | 1559 | 315 | 1529 | 1838 | 441 | 1611 | 1202 | 2161 | 1215 | 1585 | 42.0T | 1969 | 52.1 | 16.17 | 147 | | | |
| ALTERNATIVE(AB) | 148 | 183 | 79.3 | 2358 | 763 | 1957 | 2036 | 1470 | 907 | 1571 | 316 | 1540 | 1853 | 442 | 1629 | 1218 | 2186 | 1231 | 1604 | 42.4T | 1988 | 52.6 | 16.28 | 148 | | | |
| ALTERNATIVE(AC) | 149 | 182 | 79.9 | 2376T | 769T | 1968T | 2051T | 1481T | 912T | 1582T | 317T | 1550T | 1867T | 443T | 1648L | 1235L | 2211L | 1246L | 1623L | 42.7T | 2002T | 52.8T | 16.40T | 149 | | | |

August, 1962

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)
HINGE AT 1/5 POINT (0.200L)KAB = 0.231
CAB = 4.00
CBA = 0.280

POSITIVE MOMENTS (kip feet)

| LOADING | 0.3 POINT | | | | | | 0.6 POINT | | | | | | 0.8 POINT | | | | | | |
|--------------------------|-----------|-----------------|-----|-----|-----------------|-----|-----------|-----------------|-----|-----|-----------------|-----|-----------|-----------------|----------|-----|-----------------|-----|-----|
| | TRUCK (+) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | |
| ALTERNATIVE (A) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | |
| LANE (L) | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | |
| JR | M | N | P | Q | R | S | T | U | V | W | X | Y | Z | A' | B' | C' | D' | E' | |
| MAXIMUM POSITIVE MOMENTS | GL | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | FEM | FEM | FEM | SBM | FEM | GL | SL | FEM | |
| APPENDIX | PT | @ GL | @ A | @ B | @ 0.3L | @ A | @ B | @ 0.6L | @ A | @ B | @ A | @ B | @ A | @ B | @ 0.345L | @ A | @ B | @ A | @ B |

NEGATIVE MOMENTS (kip feet)

| LOADING | 0.3 POINT | | | | | | 0.6 POINT | | | | | | 0.8 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS @ A | | | | | |
|--------------------------|-----------|-----------------|-----|-----|-----------------|-----|-----------|-----------------|-----|-----|-----------------|-----|-----------|-----------------|----------|-----|-----------------|-----|------------------------------|--|--|--|--|--|
| | TRUCK (+) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | |
| TRUCK (+) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | | |
| ALTERNATIVE (A) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | | |
| LANE (L) | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | | | | | | |
| JR | M | N | P | Q | R | S | T | U | V | W | X | Y | Z | A' | B' | C' | D' | E' | | | | | | |
| MAXIMUM POSITIVE MOMENTS | GL | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | GL | SL | FEM | | | | | | |
| APPENDIX | PT | @ GL | @ A | @ B | @ 0.3L | @ A | @ B | @ 0.6L | @ A | @ B | @ A | @ B | @ A | @ B | @ 0.345L | @ A | @ B | @ A | @ B | | | | | |



| LOADING | 0.3 POINT | | | | | | 0.6 POINT | | | | | | 0.8 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS @ B | | | | | |
|--------------------------|-----------|-----------------|-----|-----|-----------------|-----|-----------|-----------------|-----|-----|-----------------|-----|-----------|-----------------|----------|-----|-----------------|-----|------------------------------|--|--|--|--|--|
| | TRUCK (+) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | |
| TRUCK (+) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | | |
| ALTERNATIVE (A) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | | |
| LANE (L) | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | A | $\frac{W}{F_1}$ | B | | | | | | |
| JR | M | N | P | Q | R | S | T | U | V | W | X | Y | Z | A' | B' | C' | D' | E' | | | | | | |
| MAXIMUM POSITIVE MOMENTS | GL | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | GL | SL | FEM | | | | | | |
| APPENDIX | PT | @ GL | @ A | @ B | @ 0.3L | @ A | @ B | @ 0.6L | @ A | @ B | @ A | @ B | @ A | @ B | @ 0.345L | @ A | @ B | @ A | @ B | | | | | |



ONE LANE LIVE LOAD (H20-516-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/5 POINT (0.200L)

KAB = 0.231

CAB = 4.00

CBA = 0.250

CBB = 0.252

POSITIVE MOMENTS (kip feet)

| SPAN LENGTH FT | MAXIMUM POSITIVE MOMENTS | MOMENTS AT 0.3 POINT | | | | | | MOMENTS AT 0.6 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS AT 0.3 POINT | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | |
|----------------|--------------------------|----------------------|-------------|------------|------------|---------------|------------|----------------------|------------|------------|---------------|------------|------------|---------------------------------------|------------|------------|---------------|------------|------------|-----------------------------|------------|------------|-----|--|--|
| | | GL FT | SBM @ GL | FEM @ A | FEM @ B | SBM @ 0.3L | FEM @ A | SBM @ 0.6L | FEM @ A | FEM @ B | SBM @ 0.6L | FEM @ A | FEM @ B | SBM @ 0.6L | FEM @ A | FEM @ B | SBM @ 0.6L | FEM @ A | FEM @ B | SBM @ 0.6L | FEM @ A | FEM @ B | | | |
| 120 | 164 | 95.8 | 2929T | 938T | 1900T | 2320T | 1637T | 1050T | 1939T | 350T | 1862T | 2306T | 474T | 2222L | 1794L | 3075L | 1787L | 2263L | 53.46 | 2506T | 631T | 1997T | 180 | | |
| 181 | 163 | 97.4 | 2946 | 944 | 1910 | 2335 | 1849 | 1055 | 1951 | 352 | 1872 | 2320 | 475 | 2294 | 1814 | 3105 | 1806 | 2285 | 53.76 | 2521 | 633 | 2009 | 181 | | |
| 182 | 163 | 97.9 | 2954 | 949 | 1921 | 2550 | 1860 | 1059 | 1962 | 353 | 1882 | 2334 | 476 | 2316 | 1834 | 3136 | 1826 | 2308 | 54.05 | 2536 | 636 | 2020 | 182 | | |
| 183 | 162 | 98.5 | 2982 | 955 | 1931 | 2665 | 1872 | 1064 | 1974 | 354 | 1892 | 2348 | 477 | 2338 | 1854 | 3156 | 1864 | 2330 | 54.35 | 2551 | 638 | 2031 | 183 | | |
| 184 | 162 | 99.0 | 3000 | 961 | 1942 | 2580 | 1883 | 1068 | 1985 | 355 | 1902 | 2362 | 478 | 2360 | 1874 | 3197 | 1864 | 2353 | 54.83 | 2571 | 644 | 2043 | 184 | | |
| 185 | 161 | 99.5 | 3016 | 966 | 1953 | 2596 | 1895 | 1072 | 1997 | 356 | 1912 | 2376 | 479 | 2382 | 1894 | 3227 | 1884 | 2376 | 55.13 | 2585 | 647 | 2054 | 185 | | |
| 186 | 161 | 100.1 | 3036 | 972 | 1963 | 2611 | 1906 | 1077 | 2008 | 357 | 1922 | 2391 | 479 | 2405 | 1914 | 3248 | 1903 | 2399 | 55.43 | 2601 | 649 | 2066 | 186 | | |
| 187 | 160 | 100.6 | 3054 | 978 | 1974 | 2626 | 1918 | 1081 | 2020 | 358 | 1932 | 2405 | 480 | 2427 | 1935 | 3289 | 1923 | 2422 | 55.73 | 2616 | 652 | 2077 | 187 | | |
| 188 | 160 | 101.1 | 3072 | 983 | 1984 | 2641 | 1929 | 1086 | 2031 | 359 | 1942 | 2419 | 481 | 2449 | 1955 | 3320 | 1943 | 2445 | 56.02 | 2631 | 654 | 2089 | 188 | | |
| 189 | 159 | 101.7 | 3090 | 989 | 1995 | 2656 | 1941 | 1090 | 2043 | 360 | 1952 | 2433 | 482 | 2472 | 1976 | 3332 | 1963 | 2468 | 56.51 | 2651 | 660 | 2100 | 189 | | |
| 190 | 159 | 102.2 | 3107 | 995 | 2005 | 2671 | 1952 | 1094 | 2054 | 362 | 1962 | 2447 | 483 | 2495 | 1997 | 3383 | 1983 | 2491 | 56.81 | 2666 | 663 | 2112 | 190 | | |
| 191 | 158 | 102.8 | 3125 | 1000 | 2016 | 2686 | 1964 | 1099 | 2066 | 363 | 1972 | 2461 | 484 | 2517 | 2017 | 3445 | 2003 | 2515 | 57.11 | 2681 | 665 | 2123 | 191 | | |
| 192 | 158 | 103.3 | 3143 | 1006 | 2026 | 2701 | 1975 | 1103 | 2077 | 364 | 1982 | 2476 | 485 | 2540 | 2038 | 3447 | 2023 | 2538 | 57.41 | 2697 | 668 | 2135 | 192 | | |
| 193 | 157 | 103.8 | 3161 | 1012 | 2037 | 2717 | 1987 | 1108 | 2089 | 365 | 1992 | 2490 | 486 | 2563 | 2059 | 3479 | 2043 | 2562 | 59.10 | 2777 | 684 | 2192 | 197 | | |
| 194 | 157 | 104.4 | 3179 | 1017 | 2047 | 2732 | 1998 | 1112 | 2100 | 366 | 2002 | 2504 | 487 | 2586 | 2081 | 3511 | 2063 | 2586 | 59.60 | 2797 | 690 | 2203 | 198 | | |
| 195 | 156 | 104.9 | 3197 | 1023 | 2058 | 2747 | 2010 | 1116 | 2112 | 367 | 2012 | 2518 | 488 | 2609 | 2102 | 3543 | 2084 | 2610 | 58.50 | 2747 | 679 | 2169 | 195 | | |
| 196 | 156 | 105.6 | 3213 | 1025 | 2071 | 2762 | 2021 | 1121 | 2124 | 368 | 2022 | 2532 | 489 | 2633 | 2123 | 3575 | 2104 | 2634 | 58.80 | 2762 | 681 | 2181 | 196 | | |
| 197 | 155 | 106.2 | 3221 | 1030 | 2081 | 2777 | 2033 | 1125 | 2135 | 369 | 2031 | 2546 | 490 | 2655 | 2145 | 3608 | 2125 | 2658 | 59.10 | 2777 | 684 | 2192 | 197 | | |
| 198 | 155 | 106.7 | 3229 | 1036 | 2092 | 2772 | 2044 | 1130 | 2147 | 370 | 2041 | 2561 | 491 | 2680 | 2166 | 3640 | 2146 | 2682 | 59.60 | 2797 | 690 | 2203 | 198 | | |
| 199 | 154 | 107.3 | 3227 | 1042 | 2103 | 2807 | 2056 | 1134 | 2158 | 372 | 2051 | 2575 | 492 | 2703 | 2188 | 3673 | 2167 | 2706 | 59.90 | 2812 | 692 | 2215 | 199 | | |
| 200 | 154 | 107.8 | 3225 | 1047 | 2113 | 2822 | 2067 | 1138 | 2170 | 373 | 2061 | 2589 | 493 | 2727 | 2210 | 3706 | 2188 | 2731 | 60.20 | 2827 | 695 | 2226 | 200 | | |
| 201 | 153 | 108.3 | 3203 | 1053 | 2124 | 2838 | 2079 | 1143 | 2181 | 374 | 2071 | 2603 | 494 | 2751 | 2232 | 3739 | 2209 | 2755 | 60.50 | 2843 | 698 | 2228 | 201 | | |
| 202 | 153 | 108.9 | 3221 | 1059 | 2134 | 2833 | 2090 | 1147 | 2193 | 375 | 2081 | 2617 | 495 | 2775 | 2254 | 3772 | 2230 | 2780 | 61.00 | 2863 | 704 | 2249 | 202 | | |
| 203 | 152 | 109.4 | 3239 | 1064 | 2145 | 2868 | 2102 | 1152 | 2204 | 376 | 2091 | 2631 | 495 | 2799 | 2276 | 3806 | 2251 | 2805 | 61.31 | 2878 | 706 | 2261 | 203 | | |
| 204 | 152 | 110.0 | 3337 | 1070 | 2155 | 2883 | 2113 | 1156 | 2216 | 377 | 2101 | 2646 | 496 | 2823 | 2298 | 3839 | 2273 | 2830 | 61.61 | 2893 | 709 | 2272 | 204 | | |
| 205 | 152 | 110.5 | 3374T | 1075T | 2166T | 2898 | 2125 | 1160 | 2227 | 378 | 2111 | 2660 | 497 | 2847 | 2321 | 3873 | 2294 | 2855 | 61.91 | 2908 | 711 | 2284 | 205 | | |
| 206 | 151 | 112.0 | 4288L | 2430L | 2896L | 2913 | 2136 | 1165 | 2239 | 379 | 2121 | 2674 | 498 | 2871 | 2343 | 3907 | 2316 | 2880 | 62.21 | 2924 | 714 | 2295 | 206 | | |
| 207 | 151 | 112.6 | 4326 | 2445L | 2861 | 2928 | 2148 | 1169 | 2250 | 381 | 2131 | 2688 | 499 | 2893 | 2366 | 3940 | 2337 | 2905 | 62.72 | 2944 | 720 | 2306 | 207 | | |
| 208 | 150 | 113.2 | 4363 | 2474 | 2866 | 2943 | 2159 | 1173 | 2262 | 382 | 2140 | 2702 | 500 | 2920 | 2388 | 3975 | 2359 | 2930 | 63.02 | 2959 | 723 | 2318 | 208 | | |
| 209 | 150 | 113.7 | 4401L | 2497L | 2911L | 2958T | 2171T | 1178T | 2273T | 383T | 2150T | 2716T | 501T | 2945L | 2411L | 4009L | 2381L | 2956L | 63.33 | 2974T | 725T | 2329T | 209 | | |

| LOADING | | POSITIVE MOMENTS (kip feet) | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | |
|-----------|----------------|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------|----|
| | | HINGE AT 1/6 POINT (0.167L) | | | | | MAXIMUM NEGATIVE MOMENTS @A | | | | | MAXIMUM NEGATIVE MOMENTS @B | | | | | MAXIMUM NEGATIVE MOMENTS @A | | | | | | |
| TRUCK (T) | ALTERNATIVE(A) | LANE(L) | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | W=0.64 $\frac{K}{Ft}$ | | |
| 30 | .300 | 15.0 | 312A | 81A | 219A | 274A | 155A | 139A | 211A | 34A | 210A | 55A | 127L | 54L | 190L | 59L | 139L | 8.8 | 271 | 59 | 227 | 30 | |
| 31 | .300 | 15.5 | 324 | 84 | 227 | 284 | 161 | 143 | 219 | 35 | 220 | 56 | 132 | 58 | 198 | 62 | 145 | 9.2 | 282 | 61 | 235 | 31 | |
| 32 | .300 | 16.1 | 336 | 87 | 234 | 294 | 167 | 146 | 227 | 35 | 227 | 56 | 138 | 62 | 207 | 65 | 152 | 9.5 | 293 | 62 | 243 | 32 | |
| 33 | .300 | 16.6 | 348 | 90 | 242 | 304 | 173 | 150 | 234 | 36 | 234 | 56 | 144 | 66 | 216 | 69 | 158 | 6.4 | 243T | 122T | 250T | 33 | |
| 34 | .300 | 17.1 | 360 | 93 | 249 | 314 | 179 | 153 | 242 | 36 | 240 | 57 | 149 | 70 | 225 | 72 | 165 | 6.70 | 256 | 123 | 262 | 34 | |
| 35 | .300 | 17.6 | 372 | 96 | 256 | 324 | 185 | 157 | 250 | 37 | 247 | 57A | 155 | 74 | 234 | 76 | 172 | 7.00 | 269 | 124 | 275 | 35 | |
| 36 | .300 | 18.2 | 383 | 99 | 264 | 334A | 191A | 160A | 257 | 38 | 254 | 58T | 200T | 161 | 78 | 244 | 80 | 179 | 7.27 | 282 | 131 | 288 | 36 |
| 37 | .300 | 18.7 | 395 | 103 | 271 | 363T | 168T | 239T | 265 | 38 | 261 | 266 | 208 | 167 | 82 | 253 | 83 | 186 | 7.55 | 295 | 138 | 300 | 37 |
| 38 | .300 | 19.2 | 407 | 106 | 278 | 376 | 195 | 281 | 273 | 39 | 268 | 279 | 216 | 173 | 87 | 253 | 87 | 193 | 7.87 | 310 | 145 | 313 | 38 |
| 39 | .300 | 19.7 | 419 | 109 | 285 | 390 | 203 | 289 | 280 | 39 | 274 | 290 | 223 | 180 | 91 | 273 | 91 | 200 | 8.15 | 324 | 152 | 325 | 39 |
| 40 | .300 | 20.3 | 431 | 112 | 293 | 403 | 210 | 297 | 288 | 40 | 281 | 300 | 229 | 186 | 96 | 262 | 95 | 208 | 8.44 | 338 | 159 | 338 | 40 |
| 41 | .300 | 20.8 | 443 | 115 | 300 | 418 | 218 | 309 | 296 | 40 | 288 | 311 | 235 | 192 | 100 | 273 | 99 | 215 | 8.73 | 352 | 166 | 350 | 41 |
| 42 | .299 | 21.3 | 455 | 118 | 307 | 433 | 225 | 322 | 303 | 41 | 295 | 322 | 241 | 199 | 105 | 303 | 103 | 223 | 9.07 | 367 | 173 | 362 | 42 |
| 43 | .298 | 21.8 | 467 | 121 | 315 | 440 | 233 | 334 | 311 | 42 | 301 | 333 | 247 | 205 | 110 | 313 | 108 | 231 | 9.37 | 381 | 180 | 375 | 43 |
| 44 | .296 | 22.4 | 479 | 124 | 322 | 464 | 241 | 345 | 319 | 42 | 308 | 344 | 252 | 212 | 115 | 324 | 112 | 239 | 8.54 | 365 | 181 | 385 | 44 |
| 45 | .294 | 22.9 | 491 | 127 | 329 | 479 | 249 | 356 | 326 | 43 | 315 | 355 | 257 | 219 | 121 | 334 | 117 | 247 | 8.82 | 379 | 182 | 399 | 45 |
| 46 | .292 | 23.4 | 503 | 131 | 336 | 494 | 256 | 367 | 334 | 43 | 321 | 366 | 261 | 226 | 121 | 345 | 121 | 255 | 9.11 | 393 | 183 | 413 | 46 |
| 47 | .291 | 24.0 | 515A | 133A | 344A | 509 | 264 | 378 | 342 | 44 | 328 | 377 | 265 | 232 | 131 | 356 | 126 | 263 | 9.45 | 408 | 186 | 427 | 47 |
| 48 | .289 | 24.1 | 583T | 169T | 440T | 524 | 273 | 368 | 349 | 45 | 335 | 388 | 269 | 239 | 137 | 367 | 130 | 271 | 9.74 | 423 | 187 | 441 | 48 |
| 49 | .287 | 24.6 | 601 | 193 | 454 | 281 | 398 | 357 | 45 | 341 | 400 | 273 | 246 | 142 | 378 | 135 | 280 | 10.04 | 437 | 189 | 454 | 49 | |
| 50 | .286 | 25.1 | 610 | 198 | 467 | 554 | 289 | 407 | 365 | 46 | 348 | 411 | 277 | 254 | 148 | 390 | 140 | 288 | 10.35 | 452 | 190 | 468 | 50 |
| 51 | .284 | 25.7 | 637 | 202 | 481 | 570 | 297 | 417 | 372 | 46 | 355 | 472 | 280 | 261 | 154 | 401 | 145 | 297 | 10.66 | 467 | 192 | 481 | 51 |
| 52 | .282 | 26.2 | 655 | 207 | 494 | 585 | 305 | 426 | 380 | 47 | 361 | 444 | 283 | 268 | 160 | 413 | 150 | 305 | 11.02 | 483 | 195 | 495 | 52 |
| 53 | .281 | 26.7 | 673 | 211 | 507 | 600 | 314 | 435 | 388 | 48 | 368 | 445 | 286 | 275 | 166 | 425 | 155 | 315 | 11.34 | 498 | 197 | 508 | 53 |
| 54 | .279 | 27.2 | 691 | 216 | 520 | 615 | 322 | 443 | 395 | 48 | 374 | 457 | 289 | 283 | 173 | 437 | 160 | 324 | 11.65 | 513 | 199 | 522 | 54 |
| 55 | .278 | 27.7 | 709 | 220 | 533 | 630 | 330 | 452 | 403 | 49 | 381 | 468 | 292 | 291 | 170 | 449 | 166 | 333 | 11.93 | 527 | 200 | 535 | 55 |
| 56 | .276 | 28.2 | 727 | 224 | 546 | 645 | 339 | 460 | 411 | 49 | 386 | 440 | 295 | 298 | 165 | 461 | 171 | 342 | 12.26 | 542 | 202 | 548 | 56 |
| 57 | .275 | 28.7 | 745 | 229 | 558 | 660 | 347 | 469 | 419 | 50 | 394 | 491 | 297 | 306 | 192 | 474 | 176 | 352 | 12.60 | 558 | 204 | 562 | 57 |
| 58 | .273 | 29.2 | 763 | 233 | 571 | 675 | 356 | 477 | 426 | 51 | 401 | 503 | 300 | 314 | 199 | 486 | 182 | 361 | 12.93 | 574 | 206 | 575 | 58 |
| 59 | .272 | 29.7 | 781T | 238T | 583T | 690T | 364T | 465T | 403A | 51A | 407A | 514T | 302T | 322L | 205L | 499L | 188L | 371L | 13.27 | 590T | 208T | 588T | 59 |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/6 POINT (0.167L)

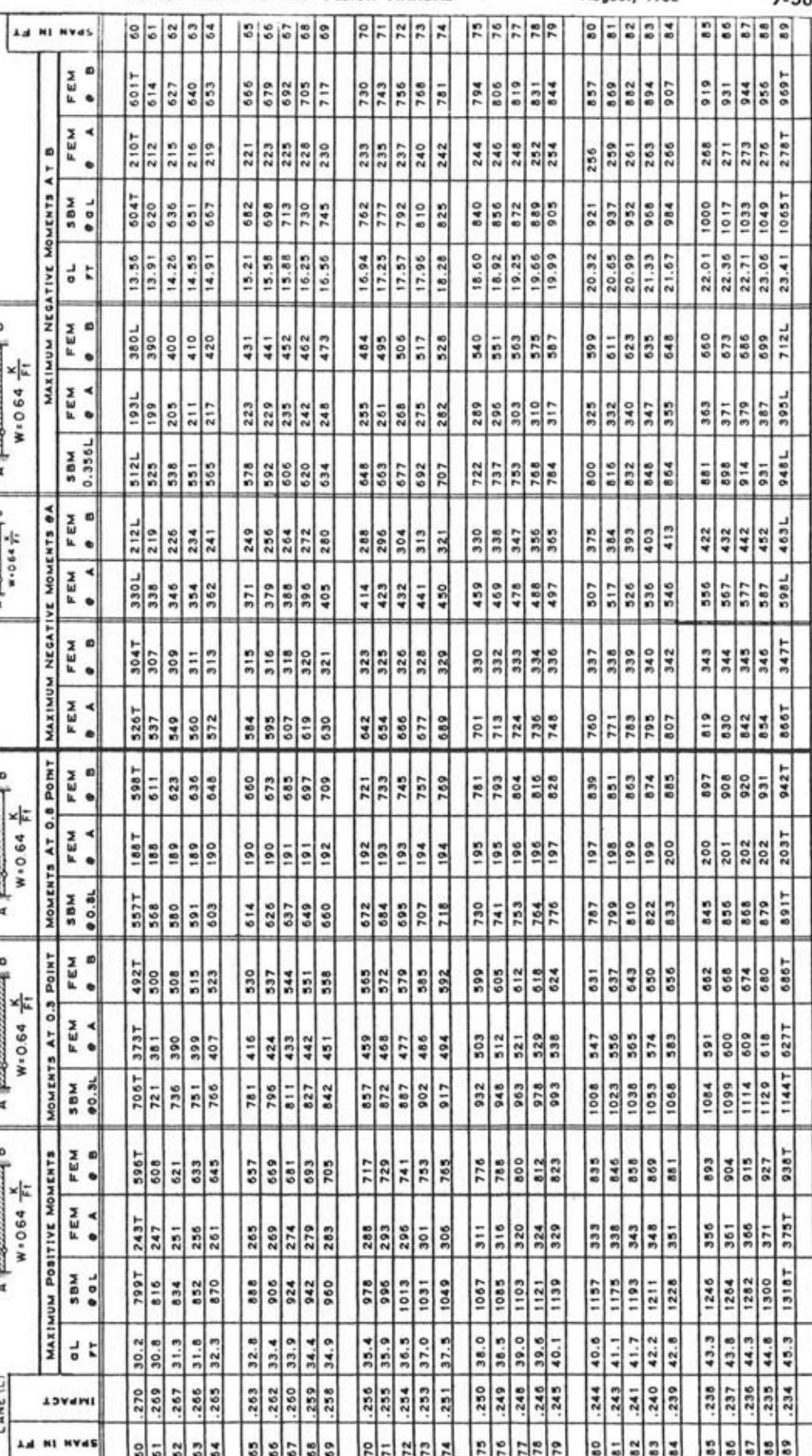
KAB = 0.144

CAB = 5.00

CBA = 0.200

POSITIVE MOMENTS. (kip feet)

| LOADING | 0.3L | | | | | | 0.8L | | | | | | 0.8L | | | | | | |
|----------|--------------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|-------|-------|
| | TRUCK (T) | ALTERNATIVE(A) | W=0.64 K/FT | W=0.64 K/FT | | |
| LANE (L) | MAXIMUM POSITIVE MOMENTS | MAXIMUM POSITIVE MOMENTS | MOMENTS AT 0.3 POINT | MOMENTS AT 0.8 POINT | | | |
| IN FEET | GL FT | SBM @ GL | FEM @ A | FEM @ B | SBM @ 0.3L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | | | |
| 60 | 270 | 30.2 | 799T | 243T | 596T | 706T | 373T | 492T | 557T | 186T | 598T | 526T | 304T | 330L | 212L | 193L | 380L | 13.5L | |
| 61 | 269 | 30.8 | 816 | 247 | 606 | 721 | 361 | 500 | 568 | 185 | 611 | 537 | 307 | 338 | 219 | 525 | 199 | 390 | 13.9L |
| 62 | 267 | 31.3 | 834 | 251 | 621 | 736 | 390 | 508 | 580 | 189 | 623 | 549 | 309 | 346 | 226 | 538 | 205 | 400 | 14.2L |
| 63 | 266 | 31.8 | 852 | 256 | 633 | 751 | 399 | 515 | 591 | 189 | 636 | 560 | 311 | 354 | 234 | 551 | 211 | 410 | 14.5L |
| 64 | 265 | 32.3 | 870 | 261 | 645 | 766 | 407 | 523 | 603 | 190 | 646 | 572 | 313 | 362 | 241 | 565 | 217 | 420 | 14.9L |
| 65 | 263 | 32.8 | 888 | 265 | 657 | 781 | 416 | 530 | 614 | 190 | 660 | 584 | 315 | 371 | 249 | 578 | 223 | 431 | 15.2L |
| 66 | 262 | 33.4 | 906 | 269 | 669 | 795 | 424 | 537 | 626 | 190 | 673 | 595 | 316 | 379 | 256 | 592 | 229 | 441 | 15.5L |
| 67 | 260 | 33.9 | 924 | 274 | 681 | 811 | 433 | 544 | 637 | 191 | 685 | 607 | 318 | 388 | 264 | 606 | 235 | 452 | 15.8L |
| 68 | 259 | 34.4 | 942 | 279 | 693 | 827 | 442 | 551 | 649 | 191 | 697 | 619 | 320 | 396 | 272 | 620 | 242 | 462 | 16.2L |
| 69 | 258 | 34.9 | 960 | 283 | 705 | 842 | 451 | 558 | 660 | 192 | 709 | 630 | 321 | 405 | 280 | 634 | 248 | 473 | 16.5L |
| 70 | 256 | 35.4 | 976 | 288 | 717 | 857 | 459 | 565 | 672 | 192 | 721 | 642 | 323 | 414 | 288 | 648 | 255 | 484 | 16.9L |
| 71 | 255 | 35.9 | 996 | 293 | 729 | 872 | 468 | 572 | 684 | 193 | 733 | 654 | 325 | 423 | 296 | 663 | 261 | 495 | 17.2L |
| 72 | 254 | 36.5 | 1013 | 296 | 741 | 887 | 477 | 579 | 695 | 193 | 745 | 666 | 326 | 432 | 304 | 677 | 268 | 506 | 17.5L |
| 73 | 253 | 37.0 | 1031 | 301 | 753 | 902 | 486 | 585 | 707 | 194 | 757 | 677 | 328 | 441 | 313 | 692 | 275 | 517 | 17.9L |
| 74 | 251 | 37.5 | 1049 | 306 | 765 | 917 | 494 | 592 | 718 | 194 | 769 | 689 | 329 | 450 | 321 | 707 | 282 | 528 | 18.2L |
| 75 | 250 | 38.0 | 1067 | 311 | 776 | 932 | 503 | 599 | 730 | 195 | 781 | 701 | 330 | 459 | 330 | 722 | 289 | 540 | 18.6L |
| 76 | 249 | 38.5 | 1085 | 316 | 788 | 948 | 512 | 605 | 741 | 195 | 793 | 713 | 332 | 469 | 338 | 737 | 296 | 551 | 18.9L |
| 77 | 248 | 39.0 | 1103 | 320 | 800 | 963 | 521 | 612 | 753 | 196 | 804 | 724 | 333 | 478 | 347 | 753 | 303 | 563 | 19.2L |
| 78 | 246 | 39.5 | 1121 | 324 | 812 | 978 | 529 | 618 | 764 | 196 | 816 | 736 | 334 | 488 | 356 | 768 | 310 | 575 | 19.6L |
| 79 | 245 | 40.1 | 1139 | 329 | 823 | 993 | 538 | 624 | 776 | 197 | 828 | 746 | 336 | 497 | 365 | 784 | 317 | 587 | 19.9L |
| 80 | 244 | 40.6 | 1157 | 333 | 835 | 1008 | 547 | 631 | 787 | 197 | 839 | 760 | 337 | 507 | 375 | 800 | 325 | 599 | 20.3L |
| 81 | 243 | 41.1 | 1175 | 338 | 846 | 1023 | 556 | 637 | 805 | 198 | 851 | 771 | 338 | 517 | 384 | 816 | 332 | 611 | 20.6L |
| 82 | 241 | 41.7 | 1193 | 343 | 856 | 1038 | 565 | 643 | 810 | 199 | 863 | 783 | 339 | 526 | 393 | 832 | 340 | 623 | 20.9L |
| 83 | 240 | 42.2 | 1211 | 348 | 869 | 1053 | 574 | 650 | 822 | 199 | 874 | 795 | 340 | 536 | 403 | 848 | 347 | 635 | 21.3L |
| 84 | 239 | 42.8 | 1228 | 351 | 881 | 1068 | 583 | 656 | 833 | 200 | 885 | 807 | 342 | 546 | 413 | 854 | 355 | 648 | 21.6L |
| 85 | 238 | 43.3 | 1246 | 356 | 893 | 1084 | 591 | 662 | 845 | 200 | 897 | 819 | 343 | 556 | 422 | 861 | 363 | 660 | 22.0L |
| 86 | 237 | 43.8 | 1264 | 361 | 904 | 1099 | 600 | 668 | 856 | 201 | 908 | 830 | 344 | 567 | 432 | 868 | 371 | 673 | 22.3L |
| 87 | 236 | 44.3 | 1282 | 366 | 915 | 1114 | 609 | 674 | 866 | 202 | 920 | 842 | 345 | 577 | 442 | 914 | 379 | 685 | 22.6L |
| 88 | 235 | 44.8 | 1300 | 371 | 927 | 1129 | 616 | 680 | 879 | 202 | 931 | 854 | 346 | 587 | 452 | 931 | 387 | 699 | 23.0L |
| 89 | 234 | 45.3 | 1318T | 375T | 938T | 1144T | 627T | 686T | 891T | 203T | 942T | 866T | 347T | 598L | 463L | 948L | 395L | 712L | 23.4L |



ONE LANE LIVE LOAD (H20-S16-44)

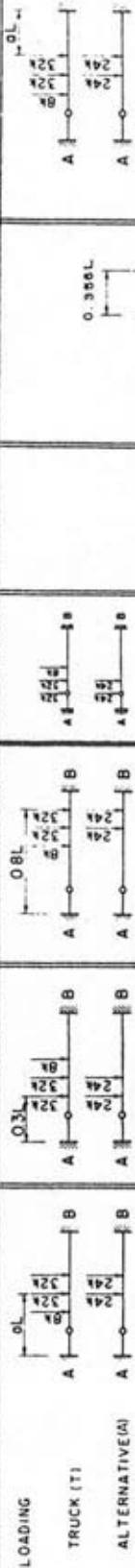
(IMPACT NOT INCLUDED)

HINGE AT 1/6 POINT (0.167L)

KAB = 0.144 CAB = 5.00

KDA = 3.573 CBA = 0.200

POSITIVE MOMENTS (kip feet)



NEGATIVE MOMENTS (kip feet)

| LOADING | MAXIMUM POSITIVE MOMENTS | MOMENTS AT 0.3 POINT | | | | | | | | MAXIMUM NEGATIVE MOMENTS AT 0.3 POINT | | | | | | | | MAXIMUM NEGATIVE MOMENTS AT B | |
|----------------|--------------------------|----------------------|----|--------|--------|--------|--------|--------|--------|---------------------------------------|----|--------|--------|--------|--------|----|-----|-------------------------------|--------|
| | | SL | BL | FEM | FEM | SBM | FEM | FEM | SBM | SL | BL | FEM | FEM | SBM | FEM | BL | SBM | FEM | |
| TRUCK (T) | W=0.64 kip/ft | a | b | 0.333L | 0.333L | 0.333L | 0.333L | 0.333L | 0.333L | a | b | 0.333L | 0.333L | 0.333L | 0.333L | a | b | 0.333L | 0.333L |
| ALTERNATIVE(A) | W=0.64 kip/ft | a | b | 0.333L | 0.333L | 0.333L | 0.333L | 0.333L | 0.333L | a | b | 0.333L | 0.333L | 0.333L | 0.333L | a | b | 0.333L | 0.333L |
| LANE (L) | W=0.64 kip/ft | a | b | 0.333L | 0.333L | 0.333L | 0.333L | 0.333L | 0.333L | a | b | 0.333L | 0.333L | 0.333L | 0.333L | a | b | 0.333L | 0.333L |

| SL | BL | FEM | FEM | SBM | FEM | FEM | SBM | SL | BL | FEM | FEM | SBM | FEM | BL | SBM | FEM | FEM | MAXIMUM NEGATIVE MOMENTS AT B | | | | |
|-----|-----|------|-------|-------|-------|------|------|-------|------|-------|-------|------|------|------|-------|------|-------|-------------------------------|-------|------|-------|-----|
| 20 | 233 | 45.9 | 1336T | 950T | 1159T | 636T | 92T | 203T | 954T | 878T | 348T | 608L | 473L | 966L | 403L | 725L | 23.76 | 1062T | 281T | 981T | 90 | |
| 91 | 231 | 46.4 | 1354 | 964 | 1174 | 645 | 698 | 914 | 204 | 965 | 890 | 349 | 619 | 483 | 983 | 411 | 738 | 24.11 | 1038 | 284 | 993 | 91 |
| 92 | 230 | 46.9 | 1372 | 988 | 1189 | 654 | 704 | 925 | 205 | 976 | 901 | 350 | 629 | 494 | 1001 | 420 | 751 | 24.38 | 1112 | 285 | 1006 | 92 |
| 93 | 229 | 47.4 | 1390 | 993 | 1205 | 663 | 710 | 937 | 205 | 987 | 913 | 351 | 640 | 505 | 1018 | 428 | 765 | 24.74 | 1129 | 288 | 1018 | 93 |
| 94 | 228 | 47.9 | 1408 | 998 | 1220 | 672 | 716 | 948 | 206 | 998 | 925 | 352 | 651 | 515 | 1036 | 437 | 778 | 25.10 | 1143 | 290 | 1030 | 94 |
| 95 | 227 | 48.4 | 1426 | 1003 | 1235 | 680 | 722 | 960 | 207 | 1009 | 937 | 353 | 662 | 526 | 1051 | 446 | 792 | 25.46 | 1162 | 293 | 1043 | 95 |
| 96 | 226 | 49.0 | 1444 | 1018 | 1250 | 689 | 728 | 972 | 207 | 1021 | 949 | 354 | 673 | 537 | 1072 | 454 | 806 | 25.82 | 1178 | 296 | 1055 | 96 |
| 97 | 225 | 49.5 | 1462 | 1029 | 1265 | 698 | 734 | 983 | 208 | 1032 | 961 | 354 | 684 | 548 | 1091 | 463 | 820 | 26.19 | 1195 | 299 | 1067 | 97 |
| 98 | 224 | 50.1 | 1479 | 1041 | 1280 | 707 | 739 | 995 | 209 | 1043 | 972 | 355 | 695 | 560 | 1109 | 472 | 834 | 26.46 | 1209 | 300 | 1079 | 98 |
| 99 | 223 | 50.6 | 1497 | 1052 | 1295 | 716 | 745 | 1006 | 209 | 1054 | 984 | 356 | 706 | 571 | 1128 | 481 | 848 | 26.83 | 1226 | 303 | 1092 | 99 |
| 100 | 222 | 51.1 | 1515 | 1063 | 1310 | 725 | 751 | 1018 | 210 | 1065 | 996 | 357 | 718 | 583 | 1146 | 490 | 862 | 27.20 | 1243 | 306 | 1104 | 100 |
| 101 | 221 | 51.6 | 1533 | 1074 | 1326 | 734 | 757 | 1029 | 211 | 1076 | 1008 | 358 | 729 | 594 | 1165 | 499 | 877 | 27.57 | 1260 | 309 | 1116 | 101 |
| 102 | 220 | 52.1 | 1551 | 1085 | 1341 | 743 | 762 | 1041 | 211 | 1087 | 1020 | 359 | 741 | 606 | 1184 | 508 | 891 | 27.85 | 1274 | 310 | 1128 | 102 |
| 103 | 219 | 52.6 | 1569 | 1097 | 1356 | 752 | 768 | 1052 | 212 | 1098 | 1032 | 360 | 752 | 618 | 1203 | 518 | 906 | 28.22 | 1291 | 313 | 1141 | 103 |
| 104 | 218 | 53.1 | 1587 | 1108 | 1371 | 761 | 774 | 1064 | 213 | 1109 | 1044 | 360 | 764 | 630 | 1223 | 527 | 921 | 28.60 | 1308 | 316 | 1153 | 104 |
| 105 | 217 | 53.7 | 1605 | 1110 | 1386 | 770 | 780 | 1075 | 213 | 1119 | 1055 | 361 | 776 | 642 | 1242 | 537 | 936 | 28.87 | 1322 | 318 | 1165 | 105 |
| 106 | 216 | 54.3 | 1623 | 1113 | 1401 | 779 | 785 | 1087 | 214 | 1130 | 1067 | 362 | 787 | 654 | 1262 | 546 | 951 | 29.26 | 1340 | 321 | 1177 | 106 |
| 107 | 215 | 54.8 | 1641 | 1115 | 1416 | 788 | 791 | 1096 | 215 | 1141 | 1079 | 363 | 799 | 666 | 1282 | 556 | 966 | 29.64 | 1357 | 324 | 1189 | 107 |
| 108 | 215 | 55.3 | 1659 | 1122 | 1431 | 797 | 797 | 1110 | 216 | 1152 | 1091 | 364 | 811 | 679 | 1301 | 565 | 981 | 29.92 | 1371 | 326 | 1201 | 108 |
| 109 | 214 | 55.8 | 1677 | 1127 | 1446 | 805 | 802 | 1121 | 216 | 1163 | 1103 | 364 | 823 | 691 | 1321 | 575 | 996 | 30.30 | 1388 | 329 | 1214 | 109 |
| 110 | 213 | 56.3 | 1695 | 1132 | 1462 | 815 | 808 | 1133 | 217 | 1174 | 1115 | 365 | 836 | 704 | 1342 | 585 | 1012 | 30.69 | 1406 | 332 | 1226 | 110 |
| 111 | 212 | 56.8 | 1713 | 1137 | 1472 | 824 | 813 | 1144 | 218 | 1184 | 1127 | 366 | 848 | 716 | 1362 | 595 | 1027 | 30.97 | 1420 | 334 | 1238 | 111 |
| 112 | 211 | 57.3 | 1731 | 1142 | 1492 | 833 | 819 | 1156 | 218 | 1195 | 1136 | 367 | 860 | 729 | 1382 | 605 | 1043 | 31.36 | 1438 | 337 | 1250 | 112 |
| 113 | 210 | 57.9 | 1749 | 1148 | 1507 | 842 | 825 | 1167 | 219 | 1206 | 1150 | 367 | 873 | 742 | 1403 | 615 | 1058 | 31.75 | 1455 | 340 | 1262 | 113 |
| 114 | 209 | 58.4 | 1767 | 1151 | 1522 | 851 | 830 | 1179 | 220 | 1217 | 1162 | 368 | 885 | 755 | 1424 | 626 | 1074 | 32.03 | 1470 | 342 | 1274 | 114 |
| 115 | 208 | 59.0 | 1784 | 1157 | 1532 | 860 | 836 | 1190 | 221 | 1227 | 1174 | 369 | 898 | 769 | 1445 | 636 | 1090 | 32.43 | 1487 | 345 | 1286 | 115 |
| 116 | 207 | 59.5 | 1802 | 1162 | 1543 | 869 | 841 | 1202 | 221 | 1238 | 1186 | 370 | 910 | 782 | 1466 | 646 | 1106 | 32.71 | 1502 | 347 | 1298 | 116 |
| 117 | 207 | 60.0 | 1820 | 1167 | 1554 | 876 | 847 | 1213 | 222 | 1242 | 1196 | 370 | 923 | 795 | 1487 | 657 | 1123 | 33.11 | 1519 | 350 | 1311 | 117 |
| 118 | 206 | 60.5 | 1838 | 1171 | 1565 | 887 | 852 | 1225 | 223 | 1259 | 120 | 371 | 936 | 809 | 1506 | 667 | 1139 | 33.39 | 1534 | 352 | 1323 | 118 |
| 119 | 205 | 61.0 | 1856T | 1173T | 1576T | 898T | 867T | 1236T | 224T | 1270T | 1222T | 372T | 949L | 822L | 1550L | 678L | 1155L | 33.80 | 1551T | 355T | 1335T | 119 |

ONE LANE LIVE LOAD (H20-S16-44)

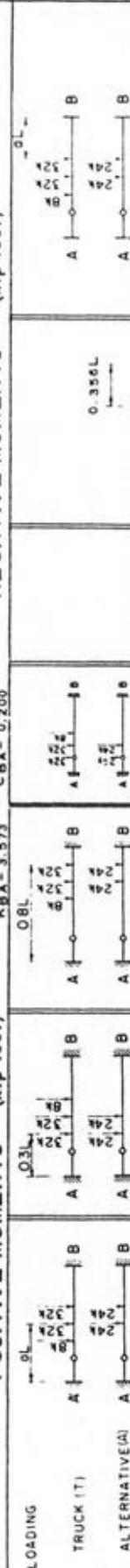
(IMPACT NOT INCLUDED)

HINGE AT 1/6 POINT (0.167L)

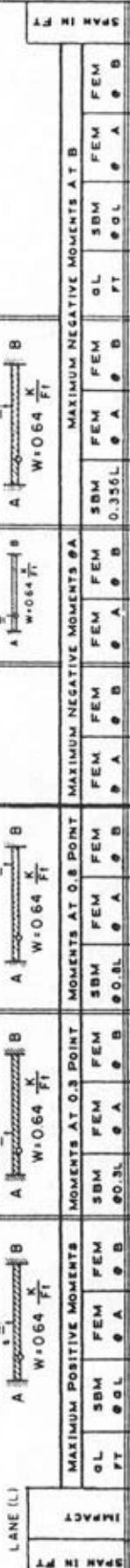
CAB = 5.00

CBA = 0.260

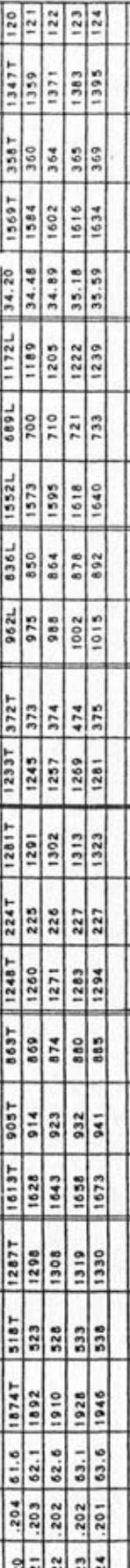
NEGATIVE MOMENTS (kip feet)



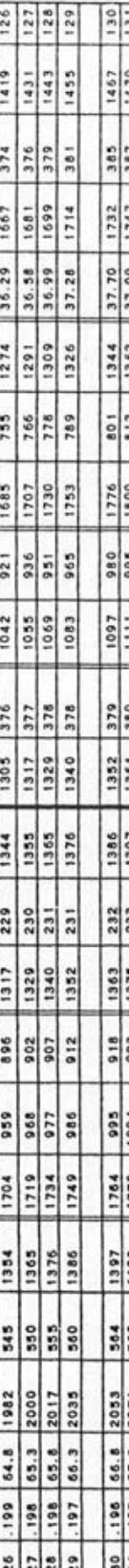
POSITIVE MOMENTS (kip feet)



NEGATIVE MOMENTS (kip feet)



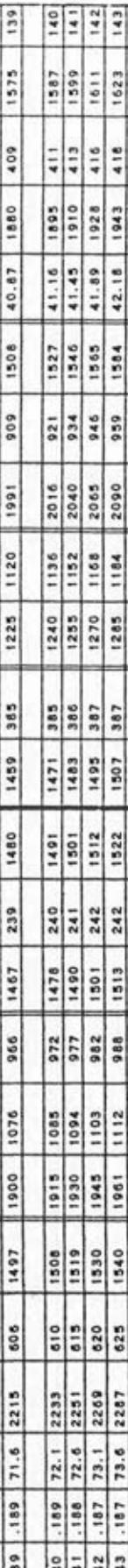
MAXIMUM NEGATIVE MOMENTS AT B



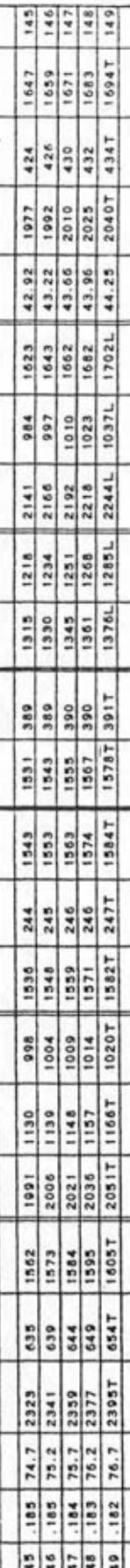
MAXIMUM NEGATIVE MOMENTS AT A



MAXIMUM NEGATIVE MOMENTS AT B



MAXIMUM NEGATIVE MOMENTS AT A



MAXIMUM NEGATIVE MOMENTS AT B

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/6 POINT (0.167L)

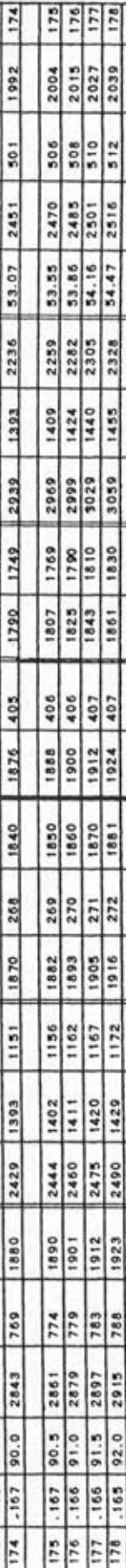
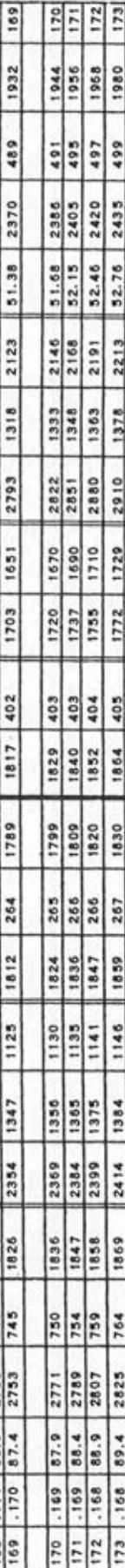
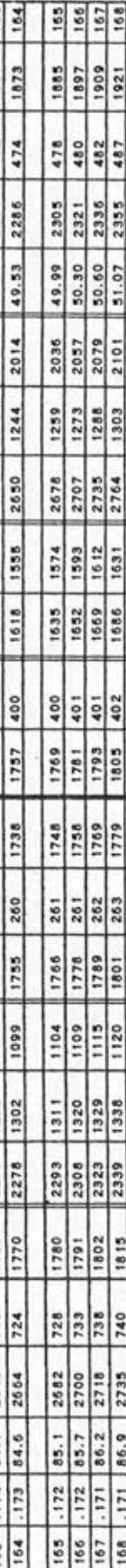
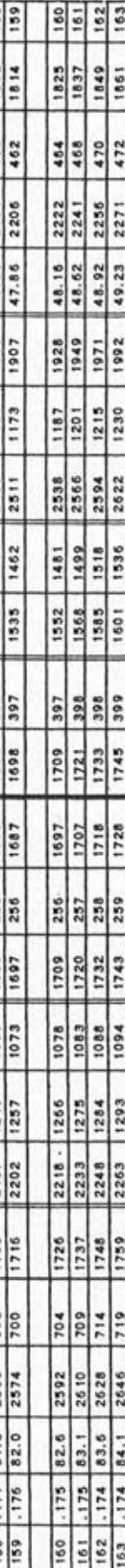
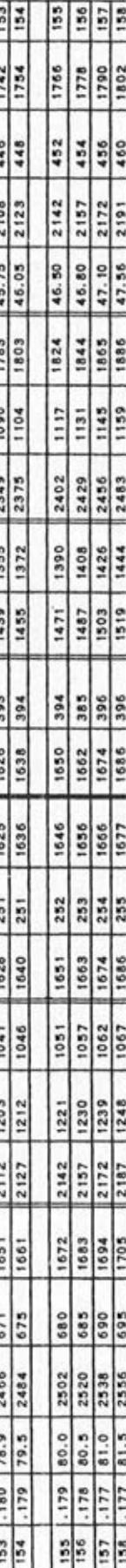
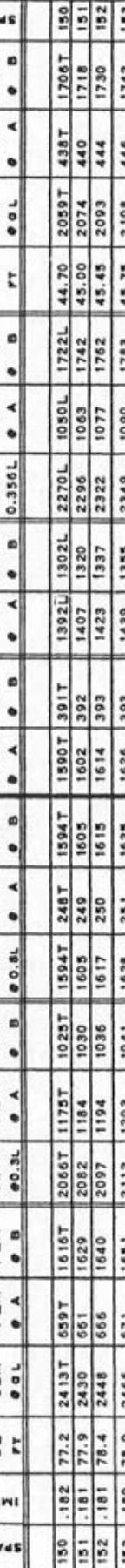
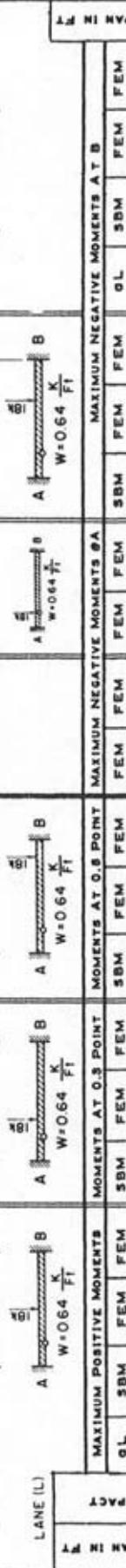
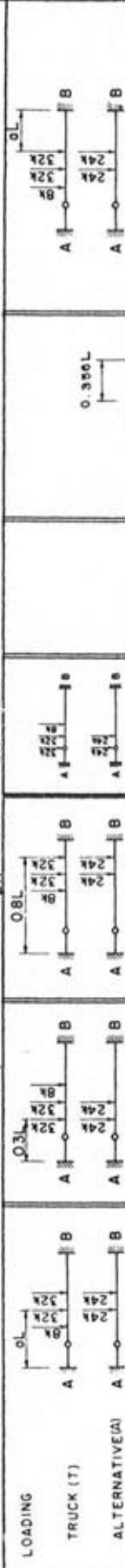
$K_{AB} = 0.144$

$C_{AB} = 5.00$

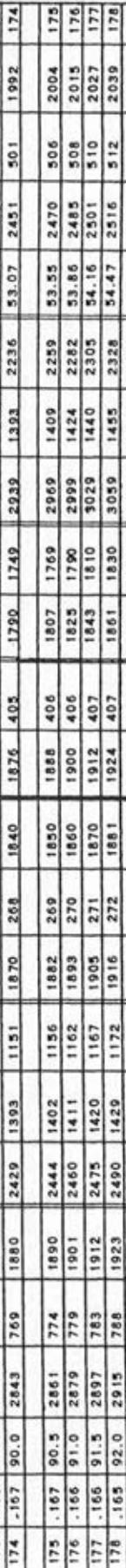
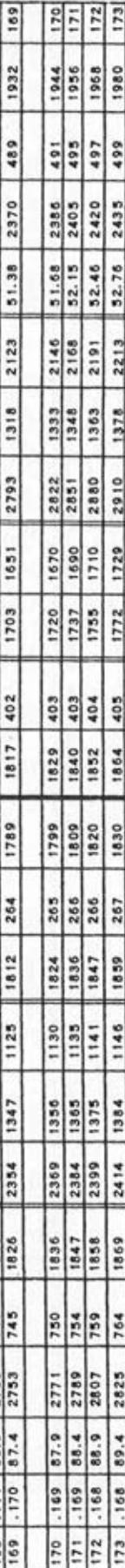
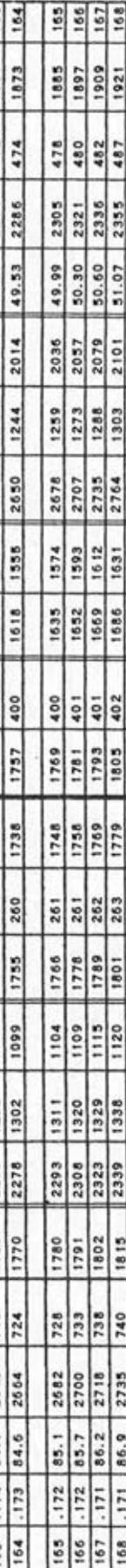
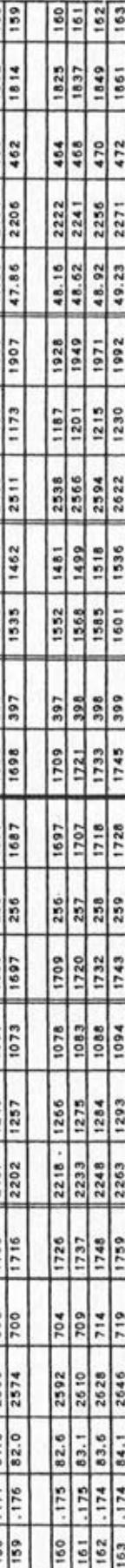
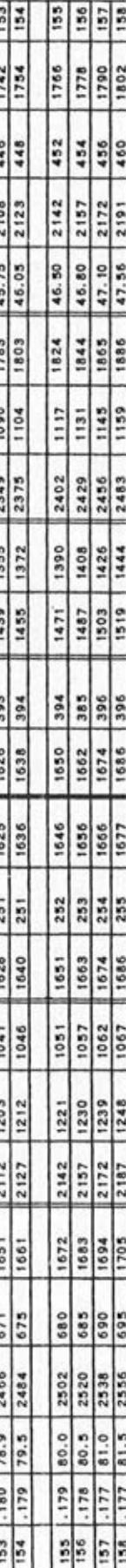
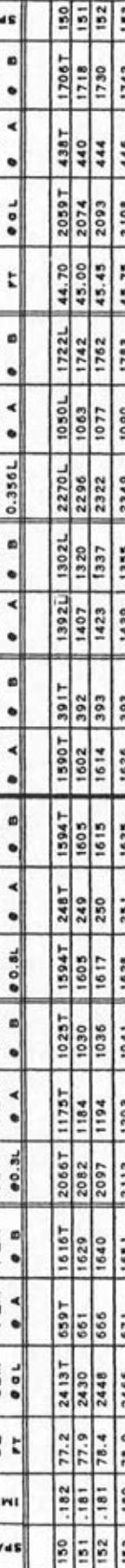
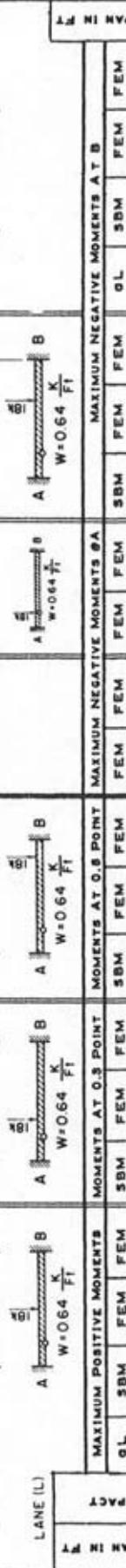
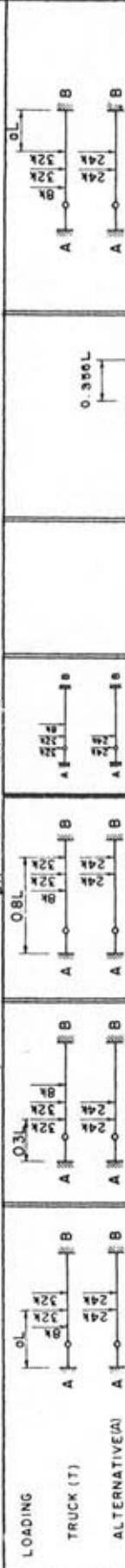
$K_{DA} = 0.200$

$C_{DA} = 3.573$

POSITIVE MOMENTS (kip feet)



NEGATIVE MOMENTS (kip feet)



ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/6 POINT (0.167L)

KAB = 0.144 CAB = 5.00

KDA = 3.573 CDA = 0.200

POSITIVE MOMENTS (kip feet)

| LOADING | MAXIMUM POSITIVE MOMENTS | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | |
|----------------|--------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|-------|-----|
| | Q.L. FT | SBM @ Q.L. | FEM @ A | FEM @ B | SBM @ 0.5L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ A | FEM @ A | FEM @ B | SBM @ 0.35L | FEM @ A | FEM @ B | SBM @ B | FEM @ A | FEM @ B | | |
| TRUCK (T) | | | | | | | | | | | | | | | | | | | | | |
| ALTERNATIVE(A) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | | |
| LANE (L) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | | |
| IN | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | W=0.64 K FT | | | |
| IMPACT | | | | | | | | | | | | | | | | | | | | | |
| Q.L. FT | | | | | | | | | | | | | | | | | | | | | |
| 180 | 164 | 93.1 | 2951T | 798T | 1944T | 2520T | 1442T | 1162T | 1939T | 273T | 1901T | 1948T | 408T | 1897L | 1871L | 3120L | 1487L | 2375L | 519T | 2063T | 180 |
| 181 | 163 | 93.6 | 2969 | 803 | 1925 | 2535 | 1456 | 1188 | 1951 | 274 | 1911 | 1950 | 409 | 1915 | 1692 | 3150 | 1502 | 2398 | 55.57 | 2556 | 181 |
| 182 | 163 | 94.1 | 2987 | 807 | 1946 | 2550 | 1463 | 1193 | 1962 | 275 | 1921 | 1972 | 410 | 1933 | 1913 | 3181 | 1518 | 2422 | 55.87 | 2582 | 182 |
| 183 | 162 | 94.6 | 3004 | 812 | 1947 | 2565 | 1474 | 1198 | 1974 | 276 | 1931 | 1983 | 410 | 1951 | 1934 | 3212 | 1534 | 2446 | 56.36 | 2601 | 183 |
| 184 | 162 | 95.1 | 3022 | 817 | 1947 | 2580 | 1483 | 1203 | 1985 | 277 | 1941 | 1995 | 411 | 1970 | 1955 | 3243 | 1551 | 2470 | 56.67 | 2617 | 184 |
| 185 | 161 | 95.6 | 3040 | 822 | 1948 | 2596 | 1492 | 1208 | 1997 | 278 | 1951 | 2007 | 411 | 1988 | 1976 | 3274 | 1567 | 2494 | 56.98 | 2632 | 185 |
| 186 | 161 | 96.2 | 3058 | 827 | 2009 | 2611 | 1501 | 1214 | 2006 | 278 | 1961 | 2019 | 412 | 2007 | 1998 | 3306 | 1583 | 2518 | 57.29 | 2647 | 186 |
| 187 | 160 | 96.7 | 3076 | 831 | 2020 | 2626 | 1510 | 1219 | 2020 | 279 | 1972 | 2031 | 412 | 2026 | 2019 | 3337 | 1599 | 2542 | 57.78 | 2657 | 187 |
| 188 | 160 | 97.4 | 3094 | 833 | 2033 | 2641 | 1519 | 1224 | 2031 | 280 | 1982 | 2043 | 413 | 2044 | 2040 | 3359 | 1618 | 2566 | 58.09 | 2663 | 188 |
| 189 | 159 | 97.9 | 3112 | 838 | 2044 | 2656 | 1529 | 1229 | 2043 | 281 | 1992 | 2055 | 413 | 2063 | 2062 | 3401 | 1632 | 2591 | 58.40 | 2678 | 189 |
| 190 | 159 | 98.4 | 3130 | 843 | 2054 | 2671 | 1538 | 1234 | 2054 | 282 | 2002 | 2067 | 414 | 2082 | 2074 | 3433 | 1649 | 2615 | 58.71 | 2713 | 190 |
| 191 | 158 | 98.9 | 3147 | 848 | 2065 | 2686 | 1547 | 1240 | 2066 | 283 | 2012 | 2070 | 414 | 2101 | 2106 | 3465 | 1665 | 2640 | 59.21 | 2733 | 191 |
| 192 | 158 | 99.5 | 3165 | 852 | 2076 | 2701 | 1556 | 1245 | 2077 | 284 | 2022 | 2091 | 415 | 2120 | 2128 | 3497 | 1682 | 2665 | 59.52 | 2749 | 192 |
| 193 | 157 | 100.0 | 3183T | 857T | 2087 | 2717 | 1565 | 1250 | 2089 | 285 | 2032 | 2103 | 415 | 2139 | 2150 | 3529 | 1699 | 2690 | 59.83 | 2764 | 193 |
| 194 | 157 | 101.9 | 3074L | 1809L | 2668L | 2732 | 1574 | 1255 | 2100 | 285 | 2042 | 2115 | 415 | 2158 | 2172 | 3552 | 1716 | 2715 | 60.14 | 2779 | 194 |
| 195 | 156 | 102.4 | 30910 | 1826 | 2683 | 2747 | 1583 | 1260 | 2112 | 286 | 2052 | 2126 | 416 | 2178 | 2194 | 3594 | 1733 | 2740 | 60.64 | 2799 | 195 |
| 196 | 156 | 102.9 | 30945 | 1844 | 2718 | 2762 | 1592 | 1265 | 2124 | 287 | 2062 | 2138 | 417 | 2197 | 2217 | 3627 | 1750 | 2765 | 60.96 | 2815 | 196 |
| 197 | 155 | 103.4 | 30981 | 1862 | 2733 | 2777 | 1601 | 1271 | 2135 | 288 | 2072 | 2150 | 418 | 2217 | 2239 | 3660 | 1768 | 2790 | 61.27 | 2830 | 197 |
| 198 | 155 | 104.0 | 4017 | 1879 | 2768 | 2792 | 1610 | 1276 | 2147 | 289 | 2082 | 2162 | 418 | 2236 | 2252 | 3693 | 1785 | 2816 | 61.58 | 2846 | 198 |
| 199 | 154 | 104.5 | 4053 | 1897 | 2794 | 2807 | 1619 | 1281 | 2158 | 290 | 2092 | 2174 | 419 | 2256 | 2285 | 3727 | 1802 | 2841 | 61.88 | 2861 | 199 |
| 200 | 154 | 105.0 | 4090 | 1915 | 2819 | 2822 | 1628 | 1286 | 2170 | 291 | 2102 | 2186 | 419 | 2276 | 2298 | 3760 | 1820 | 2867 | 62.40 | 2881 | 200 |
| 201 | 153 | 105.5 | 4126 | 1933 | 2838 | 2837 | 1637 | 1291 | 2181 | 291 | 2113 | 2198 | 420 | 2295 | 2311 | 3793 | 1837 | 2893 | 62.71 | 2897 | 201 |
| 202 | 153 | 105.0 | 4163 | 1951 | 2850 | 2853 | 1646 | 1296 | 2193 | 292 | 2123 | 2210 | 420 | 2315 | 2354 | 3827 | 1855 | 2919 | 63.02 | 2912 | 202 |
| 203 | 152 | 106.6 | 4200 | 1970 | 2856 | 2868 | 1655 | 1302 | 2204 | 293 | 2133 | 2222 | 421 | 2335 | 2377 | 3861 | 1873 | 2945 | 63.34 | 2928 | 203 |
| 204 | 152 | 107.1 | 4237 | 1988 | 2922 | 2883T | 1665T | 1307T | 2216 | 294 | 2143 | 2234 | 421 | 2355 | 2401 | 3895 | 1890 | 2971 | 63.65 | 2943 | 204 |
| 205 | 152 | 107.6 | 4274 | 2006 | 2948 | 3599L | 2231L | 2658L | 2227 | 295 | 2153 | 2246 | 422 | 2375 | 2424 | 3929 | 1908 | 2997 | 64.16 | 2964 | 205 |
| 206 | 151 | 108.2 | 4311 | 2025 | 2974 | 3630 | 2250 | 2683 | 2239 | 296 | 2163 | 2258 | 422 | 2396 | 2448 | 3963 | 1926 | 3024 | 64.48 | 2979 | 206 |
| 207 | 151 | 108.7 | 4349 | 2043 | 3001 | 3662 | 2270 | 2707 | 2250 | 297 | 2173 | 2269 | 423 | 2416 | 2471 | 3998 | 1944 | 3050 | 64.79 | 2994 | 207 |
| 208 | 150 | 109.2 | 4386 | 2052 | 3027 | 3694 | 2290 | 2732 | 2262 | 298 | 2183 | 2281 | 423 | 2436 | 2495 | 4032 | 1962 | 3077 | 65.10 | 3010 | 208 |
| 209 | 150 | 109.7 | 4424L | 2080L | 3033L | 3725L | 2309L | 2757L | 2293T | 298T | 2193T | 2293T | 424T | 2457L | 2519L | 4067L | 1981L | 3103L | 65.42 | 3025T | 209 |

| LOADING | TRUCK (T) | POSITIVE MOMENTS (kip feet) | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | |
|----------------|-----------|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------------------------|----------------------|----------------------|----------------------|----------------------|-------|------|
| | | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | | |
| ALTERNATIVE(A) | A | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | | |
| LANE (L.) | A | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | W=0.64 K/FT | | |
| L | X | MAXIMUM POSITIVE MOMENTS | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.3 POINT | | |
| MPW | GL | SBM @ GL | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | | |
| 30 | .300 | 14.6 | 313A | 70A | 225A | 274A | 127A | 151A | 216A | 181A | 52A | 109L | 35L | 192L | 50L | 143L | 9.1 | 275A | 50A | |
| 31 | .300 | 15.2 | 325 | 72 | 232 | 264 | 132 | 155 | 219 | 223 | 52 | 113 | 59 | 201 | 53 | 150 | 9.4 | 286 | 51 | |
| 32 | .300 | 15.6 | 337 | 75 | 240 | 294 | 137 | 159 | 227 | 230 | 52 | 116 | 63 | 209 | 56 | 157 | 9.8 | 297A | 53A | |
| 33 | .300 | 16.2 | 349 | 78 | 247 | 304 | 142 | 163 | 234 | 237 | 53 | 123 | 67 | 218 | 59 | 164 | 6.60 | 248T | 102T | |
| 34 | .300 | 16.7 | 361 | 80 | 255 | 314 | 147 | 167 | 242 | 30 | 244 | 209A | 53A | 120 | 71 | 228 | 62 | 171 | 6.94 | |
| 35 | .300 | 17.2 | 373 | 83 | 262 | 324 | 152 | 170 | 250 | 30 | 251 | 216T | 193 | 75 | 237 | 65 | 178 | 7.24 | 275 | |
| 36 | .300 | 17.7 | 385 | 85 | 270 | 334A | 157A | 174A | 257 | 31 | 258 | 225 | 204 | 138 | 79 | 266 | 68 | 185 | 7.56 | 289 |
| 37 | .300 | 18.2 | 397 | 86 | 277 | 363T | 154T | 287T | 265 | 31 | 265 | 234 | 212 | 143 | 84 | 256 | 71 | 192 | 7.84 | 303 |
| 38 | .300 | 18.7 | 409 | 91 | 285 | 376 | 160 | 296 | 273 | 32 | 272 | 243 | 219 | 149 | 88 | 266 | 74 | 200 | 8.13 | 316 |
| 39 | .300 | 19.3 | 421 | 93 | 292 | 390 | 166 | 305 | 280 | 32 | 279 | 252 | 225 | 154 | 93 | 276 | 78 | 207 | 8.46 | 331 |
| 40 | .300 | 19.8 | 433 | 96 | 299 | 403 | 172 | 313 | 286 | 32 | 285 | 261 | 231 | 159 | 98 | 286 | 81 | 215 | 8.76 | 345 |
| 41 | .300 | 20.3 | 445 | 99 | 307 | 416 | 178 | 326 | 296 | 33 | 292 | 270 | 237 | 165 | 103 | 296 | 85 | 223 | 9.10 | 361 |
| 42 | .299 | 20.8 | 456 | 101 | 314 | 433 | 184 | 339 | 309 | 33 | 299 | 280 | 242 | 170 | 108 | 306 | 88 | 231 | 9.41 | 375 |
| 43 | .298 | 21.3 | 468 | 104 | 322 | 449 | 191 | 352 | 311 | 34 | 306 | 289 | 247 | 176 | 113 | 317 | 92 | 239 | 8.51 | 359 |
| 44 | .296 | 21.8 | 480 | 107 | 329 | 464 | 197 | 364 | 319 | 34 | 312 | 290 | 252 | 182 | 118 | 327 | 96 | 247 | 8.80 | 372 |
| 45 | .294 | 22.3 | 492A | 109A | 377A | 479 | 204 | 376 | 326 | 35 | 319 | 308 | 256 | 187 | 124 | 338 | 99 | 255 | 9.13 | 388 |
| 46 | .292 | 22.4 | 552T | 155T | 428T | 494 | 210 | 387 | 334 | 35 | 326 | 318 | 260 | 193 | 129 | 349 | 103 | 264 | 9.43 | 402 |
| 47 | .291 | 23.0 | 559 | 159 | 442 | 509 | 217 | 398 | 342 | 36 | 333 | 328 | 264 | 199 | 135 | 360 | 107 | 272 | 9.78 | 418 |
| 48 | .289 | 23.5 | 587 | 163 | 456 | 524 | 223 | 409 | 349 | 36 | 339 | 337 | 268 | 205 | 140 | 371 | 111 | 281 | 10.08 | 432 |
| 49 | .287 | 24.0 | 605 | 166 | 470 | 539 | 230 | 419 | 357 | 37 | 346 | 347 | 271 | 211 | 146 | 383 | 115 | 290 | 10.39 | 447 |
| 50 | .286 | 24.4 | 623 | 170 | 483 | 554 | 237 | 430 | 365 | 37 | 353 | 357 | 274 | 217 | 152 | 394 | 119 | 299 | 10.75 | 463 |
| 51 | .284 | 24.9 | 641 | 174 | 497 | 570 | 243 | 440 | 372 | 38 | 360 | 367 | 277 | 223 | 156 | 406 | 124 | 308 | 11.07 | 478 |
| 52 | .282 | 25.4 | 659 | 178 | 510 | 585 | 250 | 450 | 380 | 38 | 366 | 377 | 280 | 230 | 165 | 417 | 128 | 317 | 11.39 | 493 |
| 53 | .281 | 26.0 | 677 | 181 | 523 | 600 | 257 | 459 | 388 | 39 | 373 | 386 | 283 | 236 | 171 | 429 | 132 | 326 | 11.71 | 508 |
| 54 | .279 | 26.5 | 695 | 185 | 536 | 615 | 264 | 466 | 396 | 39 | 380 | 396 | 285 | 242 | 177 | 442 | 137 | 335 | 12.04 | 524 |
| 55 | .278 | 26.9 | 713 | 189 | 549 | 630 | 271 | 476 | 403A | 40A | 386A | 406 | 288 | 249 | 184 | 454 | 141 | 345 | 12.37 | 539 |
| 56 | .276 | 27.4 | 731 | 193 | 562 | 645 | 278 | 487 | 511T | 53T | 563T | 416 | 290 | 255 | 191 | 466 | 146 | 354 | 12.71 | 555 |
| 57 | .275 | 27.9 | 749 | 197 | 575 | 660 | 285 | 496 | 522 | 153 | 576 | 426 | 293 | 262 | 198 | 479 | 150 | 364 | 13.05 | 571 |
| 58 | .273 | 28.5 | 767 | 201 | 588 | 675 | 291 | 504 | 534 | 153 | 589 | 436 | 295 | 269 | 204 | 491 | 155 | 374 | 13.40 | 587 |
| 59 | .272 | 29.0 | 785T | 205T | 601T | 690T | 298T | 513T | 545T | 503T | 602T | 466T | 297T | 275L | 212L | 504L | 160L | 386L | 13.69 | 601T |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/7 POINT (0.143L)

KAB = 0.097 CAB = 6.00

CDA = 0.167 CDA = 3.487

POSITIVE MOMENTS (kip feet)

| LOADING | TRUCK [L_e] | 0.3L | | | | | | 0.8L | | | | | | NEUTRAL | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | |
|-----------------|--------------------------|------|-------------|------------|------------|---------------|------------------------|------------------------|------------------------|------------|------------|---------------|------------|------------|---------------|------------|------------|---------------|------------|-----------------------------|---------------|------------|------------|------|-----|
| | | QL | SBM @ GL | FEM @ A | FEM @ B | SBM @ 0.3L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | | |
| ALTERNATIVE [A] | A | 179 | 2491 | 5637 | 16557 | 20667 | 9647 | 11147 | 15947 | 2027 | 16217 | 13717 | 3667 | 1189L | 1354L | 2295L | 895L | 1791L | 45.90 | 2088T | 3727T | 1750T | 150 | | |
| LANE [L_e] | A | 179 | 7.5 | 2491 | 580 | 1700 | W: 0.64 $\frac{K}{Ft}$ | W: 0.64 $\frac{K}{Ft}$ | W: 0.64 $\frac{K}{Ft}$ | 1605 | 203 | 1120 | 1631 | 1381 | 367 | 1203 | 1372 | 2321 | 907 | 1812 | 46.36 | 2107 | 375 | 1763 | 151 |
| AD | MAXIMUM POSITIVE MOMENTS | 179 | 2509 | 584 | 1711 | 2142 | 1001 | 1143 | 1651 | 205 | 1672 | 1422 | 368 | 1270 | 1454 | 2456 | 964 | 1919 | 48.05 | 2187 | 385 | 1824 | 156 | | |
| NVA | QL | 178 | 2527 | 588 | 1722 | 2157 | 1008 | 1149 | 1663 | 206 | 1683 | 1433 | 369 | 1284 | 1482 | 2483 | 976 | 1920 | 48.51 | 2206 | 389 | 1836 | 157 | | |
| AD | 177 | 2545 | 592 | 1733 | 2172 | 1015 | 1155 | 1674 | 207 | 1693 | 1443 | 369 | 1298 | 1492 | 2493 | 986 | 1924 | 48.97 | 2137 | 378 | 1787 | 153 | | | |
| NVA | QL | 176 | 2563 | 596 | 1744 | 2187 | 1023 | 1161 | 1666 | 208 | 1704 | 1453 | 369 | 1301 | 1501 | 2511 | 988 | 1962 | 48.82 | 2221 | 390 | 1848 | 158 | | |
| AD | 175 | 2581 | 601 | 1755 | 2202 | 1030 | 1167 | 1697 | 208 | 1714 | 1463 | 370 | 1312 | 1520 | 2538 | 1000 | 1984 | 49.13 | 2237 | 392 | 1850 | 159 | | | |
| NVA | QL | 174 | 2600 | 605 | 1766 | 2218 | 1038 | 1173 | 1709 | 209 | 1724 | 1473 | 370 | 1326 | 1539 | 2566 | 1012 | 2006 | 49.60 | 2256 | 396 | 1872 | 160 | | |
| AD | 173 | 2617 | 609 | 1777 | 2233 | 1045 | 1179 | 1720 | 210 | 1735 | 1484 | 370 | 1340 | 1559 | 2594 | 1024 | 2028 | 49.91 | 2271 | 397 | 1884 | 161 | | | |
| NVA | QL | 172 | 2635 | 613 | 1786 | 2248 | 1053 | 1185 | 1732 | 210 | 1745 | 1494 | 371 | 1354 | 1578 | 2622 | 1036 | 2051 | 50.22 | 2287 | 399 | 1897 | 162 | | |
| AD | 171 | 2653 | 617 | 1799 | 2263 | 1060 | 1191 | 1743 | 211 | 1755 | 1504 | 371 | 1368 | 1597 | 2651 | 1049 | 2073 | 50.69 | 2306 | 403 | 1909 | 163 | | | |
| NVA | QL | 170 | 2671 | 621 | 1810 | 2278 | 1067 | 1197 | 1755 | 212 | 1766 | 1514 | 371 | 1382 | 1617 | 2679 | 1061 | 2093 | 51.00 | 2321 | 404 | 1921 | 164 | | |
| AD | 169 | 2688 | 623 | 1823 | 2293 | 1075 | 1202 | 1766 | 212 | 1776 | 1525 | 372 | 1397 | 1637 | 2708 | 1073 | 2118 | 51.31 | 2337 | 406 | 1933 | 165 | | | |
| NVA | QL | 168 | 2706 | 627 | 1834 | 2308 | 1082 | 1206 | 1778 | 213 | 1786 | 1535 | 372 | 1411 | 1657 | 2736 | 1086 | 2141 | 51.79 | 2356 | 410 | 1945 | 166 | | |
| AD | 167 | 2724 | 631 | 1845 | 2323 | 1090 | 1214 | 1789 | 214 | 1796 | 1545 | 373 | 1426 | 1677 | 2765 | 1098 | 2164 | 52.10 | 2371 | 411 | 1957 | 167 | | | |
| NVA | QL | 166 | 2742 | 635 | 1856 | 2339 | 1097 | 1220 | 1801 | 214 | 1807 | 1555 | 373 | 1440 | 1697 | 2794 | 1111 | 2187 | 52.42 | 2387 | 413 | 1970 | 168 | | |
| AD | 165 | 2760 | 639 | 1867 | 2354 | 1105 | 1226 | 1812 | 215 | 1817 | 1566 | 373 | 1455 | 1717 | 2823 | 1123 | 2210 | 52.73 | 2402 | 415 | 1982 | 169 | | | |
| NVA | QL | 164 | 2778 | 644 | 1878 | 2369 | 1112 | 1232 | 1824 | 216 | 1827 | 1576 | 374 | 1470 | 1737 | 2853 | 1136 | 2233 | 53.21 | 2422 | 419 | 1994 | 170 | | |
| AD | 163 | 2796 | 646 | 1884 | 2384 | 1119 | 1238 | 1836 | 216 | 1836 | 1586 | 374 | 1484 | 1758 | 2862 | 1149 | 2256 | 53.52 | 2437 | 420 | 2006 | 171 | | | |
| NVA | QL | 162 | 2814 | 652 | 1900 | 2399 | 1127 | 1244 | 1847 | 217 | 1848 | 1596 | 374 | 1499 | 1778 | 2912 | 1162 | 2280 | 53.84 | 2453 | 422 | 2018 | 172 | | |
| AD | 161 | 2832 | 656 | 1911 | 1244 | 1134 | 1249 | 1859 | 218 | 1858 | 1607 | 375 | 1514 | 1799 | 2942 | 1175 | 2303 | 54.32 | 2472 | 424 | 2030 | 173 | | | |
| NVA | QL | 160 | 2850 | 660 | 1922 | 1249 | 1142 | 1255 | 1868 | 218 | 1866 | 1617 | 375 | 1529 | 1820 | 2971 | 1186 | 2327 | 54.64 | 2488 | 426 | 2042 | 174 | | |
| AD | 159 | 2868 | 664 | 1933 | 2444 | 1149 | 1261 | 1882 | 219 | 1879 | 1627 | 375 | 1544 | 1811 | 3001 | 1201 | 2351 | 54.95 | 2503 | 429 | 2055 | 175 | | | |
| NVA | QL | 158 | 2886 | 666 | 1944 | 2460 | 1157 | 1267 | 1893 | 220 | 1889 | 1637 | 376 | 1559 | 1867 | 3032 | 1214 | 2375 | 55.26 | 2519 | 431 | 2067 | 176 | | |
| AD | 157 | 2904 | 672 | 1955 | 2475 | 1164 | 1273 | 1905 | 221 | 1899 | 1647 | 376 | 1574 | 1883 | 3062 | 1227 | 2399 | 55.75 | 2538 | 435 | 2079 | 177 | | | |
| NVA | QL | 156 | 2922 | 677 | 1966 | 2490 | 1171 | 1279 | 1916 | 221 | 1909 | 1658 | 376 | 1590 | 1904 | 3093 | 1241 | 2421 | 56.07 | 2554 | 437 | 2091 | 178 | | |
| AD | 155 | 2940 | 6817 | 1977 | 2505T | 1179T | 1285T | 1928T | 222T | 1920T | 1666T | 377T | 1605L | 1925L | 3122L | 1254L | 2447L | 56.38 | 259T | 439T | 2103T | 179 | | | |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/7 POINT (0.143L)

KAB = 0.057 CAB = 6.00

KBA = 3.487 CBA = 0.167

POSITIVE MOMENTS (kip feet)

| Lane | MAXIMUM POSITIVE MOMENTS | | | | | | MOMENTS AT 0.3 POINT | | | | | | MOMENTS AT 0.6 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS | | | | | |
|------|--------------------------|------------|-----------|-----------|------------|-----------|----------------------|------------|-----------|-----------|------------|-----------|----------------------|------------|-----------|-----------|------------|-----------|--------------------------|------------|-----------|-----------|-----|--|
| | Q.L. FT | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | | |
| 1 | 0.159 | 97.7 | 3740 | 1463 | 2676 | 1261 | 1349 | 2054 | 230 | 2032 | 1781 | 1779 | 2168 | 1406 | 2723 | 60.42 | 2753 | 465 | 2236 | 190 | 476 | 2297 | 195 | |
| 2 | 1.58 | 98.2 | 3775 | 1497 | 2702 | 1268 | 1355 | 2066 | 230 | 2042 | 1791 | 1795 | 2191 | 1420 | 2748 | 60.74 | 2769 | 467 | 2248 | 191 | 476 | 2297 | 195 | |
| 3 | 1.58 | 98.7 | 3810 | 1512 | 2727 | 1275 | 1361 | 2077 | 231 | 2052 | 1801 | 1811 | 2214 | 1353 | 2774 | 61.06 | 2784 | 468 | 2251 | 192 | 478 | 2309 | 196 | |
| 4 | 1.57 | 99.2 | 3845 | 1527 | 2753 | 1283 | 1366 | 2089 | 232 | 2062 | 1811 | 1822 | 2237 | 1331 | 2867 | 62.84 | 2867 | 480 | 2261 | 192 | 478 | 2309 | 196 | |
| 5 | 1.57 | 99.7 | 3881 | 1542 | 2779 | 1290 | 1372 | 2100 | 232 | 2073 | 1822 | 1832 | 2254 | 1354 | 2932 | 61.57 | 2804 | 473 | 2273 | 193 | 478 | 2324 | 198 | |
| 6 | 1.56 | 100.2 | 3916 | 1557 | 2805 | 1297 | 1387 | 2112 | 233 | 2083 | 1832 | 1860 | 2284 | 1364 | 2952 | 62.20 | 2836 | 467 | 2248 | 191 | 476 | 2297 | 195 | |
| 7 | 1.56 | 100.7 | 3952 | 1552 | 2831 | 1322 | 1411 | 2124 | 234 | 2093 | 1842 | 1863 | 2307 | 1367 | 2879 | 62.52 | 2851 | 478 | 2309 | 196 | 478 | 2309 | 196 | |
| 8 | 1.55 | 101.3 | 3988 | 1567 | 2857 | 1347 | 1437 | 2152 | 235 | 2103 | 1852 | 1883 | 2331 | 13700 | 2905 | 62.84 | 2867 | 480 | 2261 | 192 | 478 | 2309 | 196 | |
| 9 | 1.55 | 101.8 | 4024 | 1602 | 2884 | 1366 | 1466 | 2172 | 235 | 2111 | 1863 | 1893 | 2354 | 13734 | 2932 | 63.36 | 2887 | 484 | 2273 | 193 | 478 | 2333 | 198 | |
| 10 | 1.54 | 102.3 | 4060 | 1617 | 2910 | 1381 | 1494 | 2197 | 236 | 2123 | 1873 | 1884 | 2197 | 1378 | 2957 | 63.58 | 2903 | 486 | 2345 | 199 | 478 | 2285 | 194 | |
| 11 | 1.54 | 102.8 | 4097 | 1632 | 2937 | 1405 | 1444 | 2207 | 237 | 2134 | 1893 | 1884 | 2144 | 1384 | 2985 | 64.00 | 2918 | 488 | 2357 | 200 | 478 | 2357 | 200 | |
| 12 | 1.53 | 103.3 | 4133 | 1648 | 2963 | 1435 | 1475 | 2211 | 237 | 2144 | 1893 | 1884 | 2144 | 1384 | 2985 | 64.32 | 2934 | 490 | 2369 | 201 | 478 | 2369 | 201 | |
| 13 | 1.53 | 103.8 | 4170 | 1663 | 2990 | 1463 | 1506 | 2230 | 238 | 2154 | 1903 | 1885 | 2178 | 1385 | 2985 | 64.64 | 2939 | 491 | 2382 | 202 | 478 | 2382 | 202 | |
| 14 | 1.52 | 104.3 | 4207 | 1679 | 3017 | 1537 | 1553 | 2247 | 239 | 2164 | 1914 | 1885 | 2195 | 1385 | 2985 | 65.16 | 2950 | 491 | 2394 | 203 | 478 | 2394 | 203 | |
| 15 | 1.52 | 104.9 | 4244 | 1694 | 3044 | 1566 | 1587 | 2274 | 2216 | 2174 | 1924 | 1885 | 2249 | 1393 | 2993 | 65.48 | 2956 | 497 | 2406 | 204 | 478 | 2406 | 204 | |
| 16 | 1.51 | 105.4 | 4281 | 1710 | 3071 | 1599 | 1607 | 2297 | 240 | 2184 | 1934 | 1886 | 2046 | 1396 | 2992 | 65.80 | 3001 | 499 | 2418 | 205 | 478 | 2418 | 205 | |
| 17 | 1.51 | 106.4 | 4356 | 1741 | 3126 | 1662 | 1920 | 2252 | 242 | 2205 | 1935 | 1886 | 2064 | 1397 | 3042 | 66.45 | 3033 | 503 | 2442 | 207 | 478 | 2442 | 207 | |
| 18 | 1.50 | 106.9 | 4394 | 1757 | 3153 | 1694 | 1937 | 2287 | 242 | 2215 | 1965 | 1897 | 2081 | 1398 | 3042 | 66.98 | 3033 | 507 | 2454 | 208 | 478 | 2454 | 208 | |
| 19 | 1.50 | 107.4 | 4432 | 1773 | 3181 | 1725 | 1954 | 2298 | 243 | 2225 | 1973 | 1973 | 2099 | 1398 | 3097 | 67.30 | 3232 | 5097 | 2465T | 209 | 478 | 2465T | 209 | |

NEGATIVE MOMENTS (kip feet)

| Lane | MAXIMUM NEGATIVE MOMENTS | | | | | | MOMENTS AT 0.3 POINT | | | | | | MOMENTS AT 0.6 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS | | | | | |
|------|--------------------------|------------|-----------|-----------|------------|-----------|----------------------|------------|-----------|-----------|------------|-----------|----------------------|------------|-----------|-----------|------------|-----------|--------------------------|------------|-----------|-----------|-----|--|
| | Q.L. FT | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | SBM #OL | FEM #A | FEM #B | | |
| 1 | 0.159 | 97.7 | 3740 | 1463 | 2676 | 1261 | 1349 | 2054 | 230 | 2032 | 1781 | 1779 | 2168 | 1406 | 2723 | 60.42 | 2753 | 465 | 2236 | 190 | 476 | 2297 | 195 | |
| 2 | 1.58 | 98.2 | 3775 | 1497 | 2702 | 1268 | 1355 | 2066 | 230 | 2042 | 1791 | 1811 | 2214 | 1353 | 2774 | 61.06 | 2784 | 468 | 2248 | 191 | 476 | 2297 | 195 | |
| 3 | 1.58 | 98.7 | 3810 | 1512 | 2727 | 1275 | 1361 | 2077 | 231 | 2052 | 1801 | 1811 | 2237 | 1353 | 2774 | 61.57 | 2804 | 473 | 2251 | 192 | 478 | 2309 | 196 | |
| 4 | 1.57 | 99.2 | 3845 | 1527 | 2753 | 1283 | 1366 | 2089 | 232 | 2062 | 1811 | 1822 | 2237 | 1354 | 2804 | 62.84 | 2867 | 480 | 2261 | 192 | 478 | 2309 | 196 | |
| 5 | 1.57 | 99.7 | 3881 | 1542 | 2779 | 1290 | 1372 | 2100 | 232 | 2073 | 1822 | 1832 | 2254 | 1354 | 2826 | 63.36 | 2887 | 484 | 2273 | 193 | 478 | 2333 | 198 | |
| 6 | 1.56 | 100.2 | 3916 | 1557 | 2805 | 1297 | 1387 | 2112 | 233 | 2083 | 1832 | 1860 | 2284 | 1364 | 2952 | 64.00 | 2918 | 488 | 2357 | 200 | 478 | 2357 | 200 | |
| 7 | 1.56 | 100.7 | 3952 | 1552 | 2831 | 1322 | 1411 | 2124 | 234 | 2093 | 1842 | 1863 | 2307 | 1367 | 2952 | 64.32 | 2934 | 490 | 2369 | 201 | 478 | 2369 | 201 | |
| 8 | 1.55 | 101.3 | 3988 | 1567 | 2857 | 1347 | 1437 | 2152 | 235 | 2103 | 1852 | 1883 | 2331 | 13700 | 2956 | 64.64 | 2939 | 491 | 2382 | 202 | 478 | 2382 | 202 | |
| 9 | 1.55 | 101.8 | 4024 | 1602 | 2884 | 1366 | 1466 | 2172 | 235 | 2111 | 1863 | 1893 | 2354 | 13734 | 2956 | 65.16 | 2950 | 491 | 2394 | 203 | 478 | 2394 | 203 | |
| 10 | 1.54 | 102.3 | 4060 | 1617 | 2910 | 1381 | 1494 | 2197 | 236 | 2123 | 1873 | 1884 | 2378 | 1378 | 2957 | 65.58 | 2903 | 493 | 2393 | 199 | 478 | 2395 | 199 | |
| 11 | 1.54 | 102.8 | 4097 | 1632 | 2937 | 1405 | 1444 | 2207 | 237 | 2134 | 1893 | 1884 | 2402 | 13801 | 2985 | 66.00 | 2918 | 488 | 2357 | 200 | 478 | 2357 | 200 | |
| 12 | 1.53 | 103.3 | 4133 | 1648 | 2963 | 1435 | 1475 | 2211 | 237 | 2144 | 1893 | 1884 | 2426 | 13835 | 2985 | 66.32 | 2934 | 490 | 2369 | 201 | 478 | 2369 | 201 | |
| 13 | 1.53 | 103.8 | 4170 | 1663 | 2990 | 1463 | 1506 | 2230 | 238 | 2154 | 1903 | 1885 | 2450 | 13869 | 2985 | 66.64 | 2939 | 491 | 2382 | 202 | 478 | 2382 | 202 | |
| 14 | 1.52 | 104.3 | 4207 | 1679 | 3017 | 1537 | 1553 | 2247 | 239 | 2164 | 1914 | 1885 | 2474 | 13903 | 2993 | 67.06 | 2950 | 491 | 2394 | 203 | 478 | 2394 | 203 | |
| 15 | 1.52 | 104.9 | 4244 | 1694 | 3044 | 1566 | 1587 | 2274 | 2216 | 2174 | 1924 | 1885 | 2499 | 13938 | 3097 | 67.48 | 2956 | 497 | 2406 | 204 | 478 | 2406 | 204 | |
| 16 | 1.51 | 105.4 | 4281 | 1710 | 3071 | 1599 | 1607 | 2297 | 240 | 2184 | 1934 | 1886 | 2523 | 13972 | 3092 | 67.81 | 3001 | 499 | 2418 | 205 | 478 | 2418 | 205 | |
| 17 | 1.51 | 106.4 | 4356 | 1741 | 3126 | 1662 | 1920 | 2252 | 242 | 2205 | 1935 | 1886 | 264 | 1397 | 3092 | 68.15 | 3017 | 501 | 2430 | 206 | 478 | 2430 | 206 | |
| 18 | 1.50 | 106.9 | 4394 | 1757 | 3153 | 1694 | 1937 | 2287 | 242 | 2215 | 1965 | 1897 | 264 | 1398 | 3092 | 68.45 | 3033 | 503 | 2442 | 207 | 478 | 2442 | 207 | |
| 19 | 1.50 | 107.4 | 4432 | 1773 | 3181 | 1725 | 1954 | 2298 | 243 | 2239 | 1944 | 1886 | 264 | 1398 | 3097 | 68.73 | 3033 | 507 | 2454 | 208 | 478 | 2454 | 208 | |
| 20 | 1.50 | 107.9 | 44318 | 1786 | 3098 | 1630 | 1903 | 2286 | 2239 | 2194 | 1944 | 1886 | 264 | 1398 | 3097 | 69.01 | 3037 | 507 | 2465T | 209 | 478 | 2465T | 209 | |

| LOADING | | POSITIVE MOMENTS (kip feet) | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | | | |
|----------------|----------|-----------------------------|-------|-----------|------|-----------|------|-----------------------------|--------|------|------|--------|------|-------------------------------|--------|------|------|-------|-------|-------|-------|-------|-----|-----|-----|
| ALTERNATIVE(A) | LANE (L) | MAXIMUM POSITIVE MOMENTS | W | 0.3 POINT | W | 0.8 POINT | W | 0.8 POINT | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | FEM | GL | SBM | FT | GL | @ A | @ B |
| SPAD | ft | GL | SBM | FEM | SBM | FEM | SBM | FEM | @ 0.3L | @ A | @ B | @ 0.8L | @ A | @ B | @ 0.3L | @ A | @ B | GL | SBM | FT | GL | @ A | @ B | | |
| TRUCK (T) | | 26.7 | 808T | 184T | 626T | 706T | 206T | 544T | 130T | 928T | 402T | 206T | 246L | 225L | 521L | 143L | 405L | 14.40 | 627T | 153T | 635T | 60 | | | |
| ALTERNATIVE(A) | | 26.7 | 808T | 184T | 626T | 706T | 206T | 544T | 130 | 928 | 410 | 298 | 282 | 232 | 534 | 148 | 416 | 14.76 | 643 | 155 | 646 | 61 | | | |
| 60 | 270 | 26.7 | 808T | 184T | 626T | 706T | 206T | 544T | 130 | 928 | 410 | 298 | 288 | 240 | 547 | 152 | 426 | 15.13 | 659 | 157 | 662 | 62 | | | |
| 61 | 269 | 29.2 | 823 | 188 | 639 | 721 | 264 | 553 | 555 | 130 | 954 | 419 | 300 | 288 | 240 | 548 | 156 | 437 | 15.43 | 674 | 158 | 675 | 63 | | |
| 62 | 267 | 29.7 | 841 | 191 | 651 | 736 | 270 | 562 | 560 | 130 | 966 | 428 | 301 | 288 | 248 | 561 | 158 | 437 | 15.81 | 691 | 160 | 689 | 64 | | |
| 63 | 266 | 30.2 | 859 | 195 | 664 | 751 | 276 | 570 | 571 | 130 | 971 | 437 | 303 | 271 | 255 | 575 | 161 | 448 | 16.18 | 708 | 162 | 702 | 65 | | |
| 64 | 265 | 30.7 | 877 | 198 | 677 | 766 | 282 | 579 | 563 | 131 | 979 | 437 | 303 | 271 | 255 | 575 | 165 | 459 | 16.55 | 723 | 163 | 716 | 66 | | |
| 65 | 263 | 31.2 | 895 | 201 | 689 | 781 | 288 | 588 | 514 | 131 | 992 | 446 | 304 | 277 | 264 | 589 | 165 | 469 | 16.98 | 740 | 16.50 | 720 | 67 | | |
| 66 | 262 | 31.7 | 913 | 205 | 701 | 796 | 294 | 596 | 526 | 131 | 104 | 454 | 306 | 283 | 272 | 603 | 170 | 470 | 17.5 | 748 | 16.86 | 740 | 67 | | |
| 67 | 260 | 32.2 | 931 | 208 | 714 | 811 | 300 | 605 | 637 | 131 | 116 | 463 | 307 | 290 | 280 | 617 | 175 | 481 | 17.93 | 755 | 167 | 742 | 68 | | |
| 68 | 259 | 32.6 | 949 | 212 | 726 | 827 | 306 | 613 | 649 | 132 | 129 | 472 | 308 | 296 | 289 | 631 | 179 | 493 | 17.20 | 775 | 167 | 742 | 68 | | |
| 69 | 258 | 33.2 | 957 | 215 | 739 | 842 | 312 | 621 | 660 | 132 | 132 | 481 | 310 | 303 | 297 | 648 | 184 | 504 | 17.59 | 777 | 169 | 756 | 69 | | |
| 70 | 256 | 33.7 | 965 | 216 | 751 | 857 | 318 | 629 | 672 | 132 | 783 | 490 | 311 | 309 | 305 | 660 | 189 | 516 | 17.92 | 788 | 170 | 768 | 70 | | |
| 71 | 255 | 34.2 | 1005 | 222 | 763 | 872 | 324 | 637 | 684 | 133 | 756 | 498 | 312 | 310 | 315 | 675 | 194 | 526 | 18.22 | 803 | 172 | 782 | 71 | | |
| 72 | 254 | 34.6 | 1021 | 226 | 775 | 887 | 330 | 645 | 695 | 133 | 778 | 507 | 313 | 323 | 323 | 690 | 199 | 540 | 18.65 | 821 | 174 | 798 | 72 | | |
| 73 | 253 | 35.1 | 1038 | 229 | 787 | 902 | 336 | 653 | 707 | 133 | 790 | 516 | 314 | 329 | 329 | 705 | 204 | 552 | 18.97 | 837 | 176 | 806 | 73 | | |
| 74 | 251 | 35.6 | 1056 | 233 | 799 | 917 | 342 | 661 | 718 | 134 | 802 | 525 | 315 | 336 | 342 | 720 | 209 | 564 | 19.31 | 852 | 177 | 822 | 74 | | |
| 75 | 250 | 36.1 | 1074 | 236 | 812 | 932 | 349 | 688 | 730 | 134 | 814 | 534 | 316 | 349 | 351 | 735 | 214 | 576 | 19.65 | 868 | 179 | 838 | 75 | | |
| 76 | 249 | 36.6 | 1092 | 239 | 824 | 948 | 385 | 676 | 741 | 134 | 826 | 543 | 317 | 350 | 350 | 751 | 219 | 588 | 20.05 | 886 | 181 | 848 | 76 | | |
| 77 | 248 | 37.1 | 1110 | 243 | 835 | 963 | 361 | 684 | 753 | 135 | 838 | 552 | 318 | 377 | 370 | 765 | 220 | 591 | 20.40 | 902 | 183 | 861 | 77 | | |
| 78 | 246 | 37.6 | 1128 | 247 | 847 | 976 | 387 | 691 | 764 | 135 | 850 | 560 | 319 | 384 | 379 | 782 | 230 | 614 | 20.75 | 916 | 185 | 874 | 78 | | |
| 79 | 245 | 38.1 | 1146 | 250 | 859 | 993 | 375 | 699 | 776 | 135 | 861 | 569 | 320 | 371 | 389 | 798 | 236 | 626 | 21.09 | 934 | 186 | 887 | 79 | | |
| 80 | 244 | 38.6 | 1164 | 254 | 871 | 1006 | 379 | 707 | 787 | 136 | 873 | 578 | 321 | 376 | 390 | 814 | 241 | 639 | 21.44 | 950 | 188 | 900 | 80 | | |
| 81 | 243 | 39.1 | 1182 | 257 | 884 | 1023 | 386 | 714 | 799 | 137 | 885 | 587 | 322 | 386 | 409 | 830 | 247 | 652 | 21.79 | 966 | 193 | 913 | 81 | | |
| 82 | 241 | 39.6 | 1200 | 260 | 895 | 1038 | 391 | 722 | 810 | 137 | 897 | 596 | 323 | 393 | 419 | 847 | 252 | 665 | 22.22 | 984 | 192 | 926 | 82 | | |
| 83 | 240 | 40.1 | 1218 | 264 | 907 | 1053 | 397 | 729 | 822 | 137 | 908 | 605 | 323 | 400 | 429 | 853 | 258 | 679 | 22.58 | 1001 | 194 | 939 | 83 | | |
| 84 | 239 | 40.6 | 1236 | 267 | 912 | 1058 | 404 | 735 | 833 | 137 | 920 | 614 | 324 | 408 | 440 | 860 | 264 | 692 | 22.93 | 1017 | 196 | 953 | 84 | | |
| 85 | 238 | 41.1 | 1254 | 271 | 931 | 1084 | 410 | 744 | 845 | 138 | 932 | 623 | 325 | 415 | 450 | 897 | 269 | 706 | 23.29 | 1033 | 198 | 965 | 85 | | |
| 86 | 237 | 41.6 | 1272 | 275 | 942 | 1099 | 416 | 751 | 856 | 138 | 943 | 631 | 326 | 423 | 461 | 914 | 276 | 710 | 23.65 | 1050 | 200 | 978 | 86 | | |
| 87 | 236 | 42.1 | 1290 | 277 | 955 | 1114 | 422 | 758 | 868 | 139 | 955 | 640 | 326 | 431 | 472 | 931 | 281 | 733 | 24.01 | 1066 | 201 | 991 | 87 | | |
| 88 | 235 | 42.6 | 1308 | 281 | 957 | 1129 | 428 | 765 | 879 | 139 | 966 | 649 | 327 | 438 | 483 | 946 | 287 | 747 | 24.38 | 1083 | 203 | 1004 | 88 | | |
| 89 | 234 | 43.1 | 1326T | 285T | 978T | 1144T | 434T | 773T | 891T | 139T | 981T | 657T | 320T | 440L | 440L | 951L | 293L | 751L | 24.65 | 1097T | 204T | 1017T | 89 | | |

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

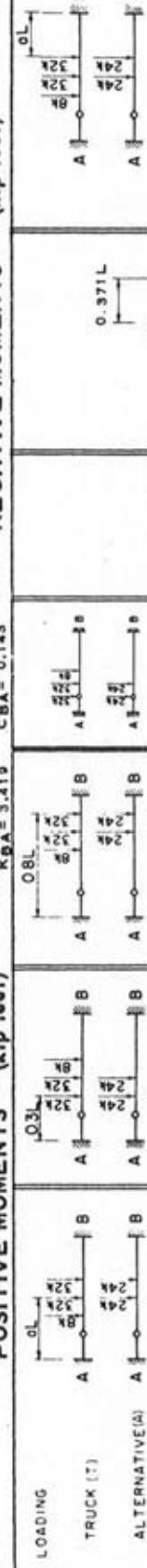
HINGE AT 1/8 POINT (0.125L)

KAB = .070

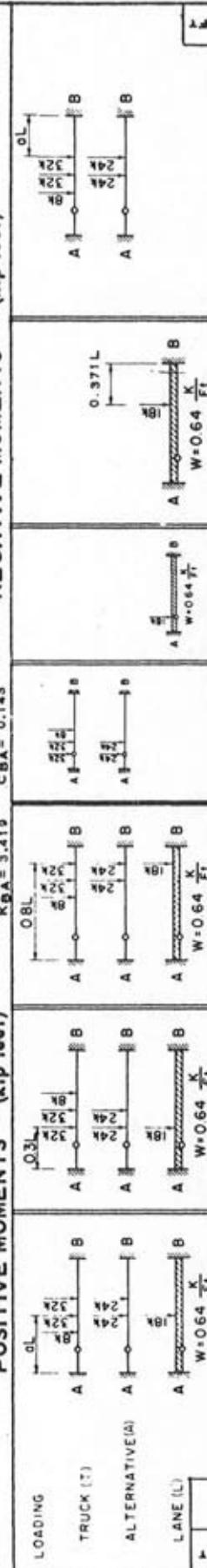
CAB = 7.0

CBA = 0.143

POSITIVE MOMENTS (kip feet)



NEGATIVE MOMENTS (kip feet)



MAXIMUM NEGATIVE MOMENTS AT 0.8 POINT

| Lane No. | Lane Length | MAXIMUM POSITIVE MOMENTS | | | | | | MOMENTS AT 0.8 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS AT 0.8 POINT | | | | | | MAXIMUM NEGATIVE MOMENTS AT 8 | | | | | | |
|----------|-------------|--------------------------|-------|------|-------|-------|------|----------------------|-------|------|-------|-------|------|---------------------------------------|------|--------|------|-------|-------|-------------------------------|------|-------|-------|-------|-------|-----|
| | | GL PT | SBM | FEM | FEM | SBM | FEM | SL PT | SBM | FEM | FEM | SL PT | SBM | FEM | FEM | SL PT | SBM | FEM | FEM | SL PT | SBM | FEM | FEM | SL PT | SBM | FEM |
| 90 | 233 | 43.6 | 1344T | 2887 | 9907 | 1169T | 441T | 780T | 902T | 140T | 989T | 662T | 328T | 454T | 505T | 0.371L | 299L | 988L | 988L | 0.371L | 775L | 25.02 | 1114T | 206T | 1030T | 90 |
| 91 | 231 | 44.0 | 1362 | 292 | 1001 | 1174 | 447 | 787 | 914 | 140 | 1001 | 676 | 329 | 462 | 516 | 1001 | 305 | 789 | 25.39 | 1131 | 205 | 1042 | 91 | | | |
| 92 | 230 | 44.5 | 1360 | 296 | 1013 | 1189 | 453 | 794 | 925 | 141 | 1012 | 685 | 330 | 470 | 527 | 1018 | 312 | 803 | 25.76 | 1147 | 210 | 1055 | 92 | | | |
| 93 | 229 | 45.0 | 1368 | 299 | 1025 | 1205 | 460 | 801 | 937 | 141 | 1023 | 694 | 330 | 476 | 539 | 1027 | 318 | 818 | 26.13 | 1164 | 212 | 1068 | 93 | | | |
| 94 | 228 | 45.5 | 1416 | 302 | 1037 | 1220 | 465 | 808 | 946 | 142 | 1035 | 703 | 331 | 486 | 550 | 1035 | 324 | 833 | 26.51 | 1181 | 214 | 1081 | 94 | | | |
| 95 | 227 | 46.1 | 1434 | 305 | 1049 | 1235 | 471 | 816 | 960 | 142 | 1046 | 712 | 331 | 494 | 562 | 1073 | 331 | 847 | 26.88 | 1198 | 216 | 1094 | 95 | | | |
| 96 | 226 | 46.6 | 1451 | 309 | 1060 | 1250 | 478 | 823 | 972 | 142 | 1057 | 721 | 332 | 502 | 574 | 1091 | 337 | 862 | 27.26 | 1215 | 218 | 1106 | 96 | | | |
| 97 | 225 | 47.0 | 1469 | 313 | 1072 | 1265 | 484 | 830 | 983 | 143 | 1066 | 729 | 333 | 510 | 586 | 1110 | 344 | 877 | 27.55 | 1229 | 219 | 1119 | 97 | | | |
| 98 | 224 | 47.5 | 1467 | 316 | 1083 | 1280 | 490 | 837 | 995 | 143 | 1080 | 736 | 333 | 519 | 598 | 1120 | 350 | 892 | 27.93 | 1246 | 222 | 1132 | 98 | | | |
| 99 | 223 | 48.0 | 1505 | 320 | 1095 | 1295 | 496 | 844 | 1006 | 144 | 1091 | 747 | 334 | 527 | 610 | 1148 | 357 | 907 | 28.31 | 1263 | 224 | 1145 | 99 | | | |
| 100 | 222 | 48.5 | 1523 | 324 | 1106 | 1310 | 502 | 851 | 1018 | 144 | 1102 | 756 | 334 | 555 | 623 | 1167 | 364 | 923 | 28.70 | 1280 | 226 | 1157 | 100 | | | |
| 101 | 221 | 49.1 | 1541 | 326 | 1119 | 1326 | 509 | 857 | 1022 | 145 | 1113 | 761 | 335 | 564 | 635 | 1186 | 370 | 938 | 28.99 | 1295 | 227 | 1170 | 101 | | | |
| 102 | 220 | 49.6 | 1559 | 330 | 1130 | 1341 | 515 | 864 | 1041 | 145 | 1124 | 774 | 335 | 553 | 646 | 1205 | 377 | 954 | 29.38 | 1312 | 229 | 1183 | 102 | | | |
| 103 | 219 | 50.1 | 1577 | 333 | 1142 | 1356 | 521 | 871 | 1052 | 146 | 1135 | 783 | 336 | 561 | 660 | 1225 | 384 | 970 | 29.77 | 1330 | 231 | 1196 | 103 | | | |
| 104 | 218 | 50.5 | 1595 | 337 | 1153 | 1371 | 527 | 878 | 1064 | 146 | 1147 | 792 | 336 | 570 | 673 | 1245 | 391 | 985 | 30.16 | 1347 | 234 | 1208 | 104 | | | |
| 105 | 217 | 51.0 | 1613 | 341 | 1165 | 1386 | 534 | 885 | 1078 | 147 | 1156 | 801 | 337 | 579 | 686 | 1264 | 398 | 1001 | 30.48 | 1362 | 238 | 1221 | 105 | | | |
| 106 | 216 | 51.5 | 1631 | 344 | 1176 | 1401 | 540 | 892 | 1087 | 147 | 1169 | 810 | 337 | 597 | 699 | 1284 | 405 | 1017 | 30.85 | 1379 | 237 | 1234 | 106 | | | |
| 107 | 216 | 52.0 | 1649 | 348 | 1188 | 1416 | 546 | 899 | 1098 | 148 | 1180 | 819 | 338 | 606 | 713 | 1304 | 412 | 1034 | 31.24 | 1395 | 239 | 1246 | 107 | | | |
| 108 | 215 | 52.5 | 1667 | 352 | 1199 | 1431 | 552 | 906 | 1110 | 148 | 1191 | 826 | 338 | 605 | 726 | 1325 | 420 | 1050 | 31.54 | 1411 | 241 | 1259 | 108 | | | |
| 109 | 214 | 53.0 | 1685 | 355 | 1210 | 1446 | 558 | 912 | 1121 | 149 | 1202 | 837 | 339 | 614 | 739 | 1345 | 427 | 1067 | 31.94 | 1429 | 243 | 1272 | 109 | | | |
| 110 | 213 | 53.5 | 1703 | 358 | 1223 | 1462 | 565 | 919 | 1133 | 149 | 1213 | 846 | 339 | 623 | 753 | 1366 | 434 | 1083 | 32.34 | 1446 | 248 | 1284 | 110 | | | |
| 111 | 212 | 54.1 | 1721 | 361 | 1234 | 1477 | 571 | 926 | 1144 | 150 | 1224 | 855 | 339 | 632 | 767 | 1386 | 442 | 1100 | 32.63 | 1461 | 246 | 1297 | 111 | | | |
| 112 | 211 | 54.5 | 1739 | 365 | 1246 | 1492 | 577 | 933 | 1156 | 150 | 1234 | 863 | 340 | 642 | 781 | 1407 | 449 | 1117 | 33.04 | 1479 | 249 | 1309 | 112 | | | |
| 113 | 210 | 55.0 | 1757 | 369 | 1257 | 1507 | 583 | 939 | 1167 | 151 | 1245 | 872 | 340 | 651 | 795 | 1428 | 457 | 1134 | 33.45 | 1497 | 251 | 1322 | 113 | | | |
| 114 | 209 | 55.5 | 1775 | 372 | 1269 | 1522 | 590 | 946 | 1179 | 151 | 1256 | 881 | 341 | 660 | 809 | 1449 | 464 | 1151 | 33.74 | 1512 | 252 | 1335 | 114 | | | |
| 115 | 208 | 56.0 | 1793 | 376 | 1280 | 1537 | 596 | 953 | 1190 | 152 | 1267 | 890 | 341 | 670 | 823 | 1471 | 472 | 1168 | 34.16 | 1529 | 255 | 1347 | 115 | | | |
| 116 | 207 | 56.5 | 1811 | 380 | 1291 | 1552 | 602 | 960 | 1202 | 152 | 1276 | 899 | 342 | 679 | 837 | 1492 | 480 | 1185 | 34.45 | 1544 | 256 | 1360 | 116 | | | |
| 117 | 207 | 57.0 | 1829 | 383 | 1303 | 1567 | 606 | 966 | 1213 | 153 | 1289 | 905 | 342 | 689 | 852 | 1514 | 487 | 1203 | 34.67 | 1562 | 259 | 1372 | 117 | | | |
| 118 | 206 | 57.5 | 1847 | 387 | 1314 | 1583 | 615 | 973 | 1225 | 153 | 1300 | 917 | 342 | 698 | 866 | 1535 | 495 | 1220 | 35.16 | 1577 | 260 | 1385 | 118 | | | |
| 119 | 206 | 58.1 | 1865T | 389T | 1327T | 1598T | 621T | 980T | 1236T | 154T | 1311T | 927T | 343T | 706T | 881L | 1557L | 503L | 1236L | 35.58 | 1599T | 262T | 1398T | 119 | | | |

February 1965

ONE LANE LIVE LOAD (H20-S16-44)

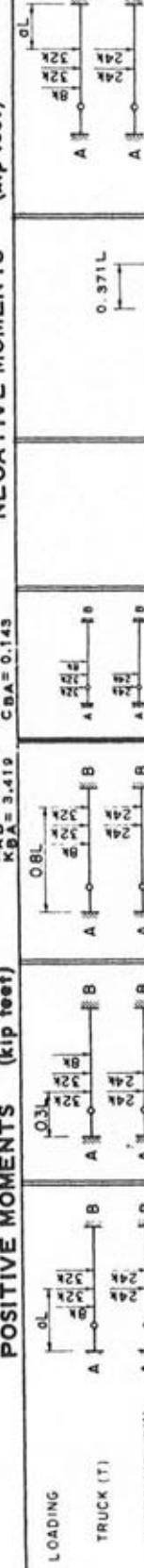
(IMPACT NOT INCLUDED)

HINGE AT 1/8 POINT (0.125L)

KAB = 7.0

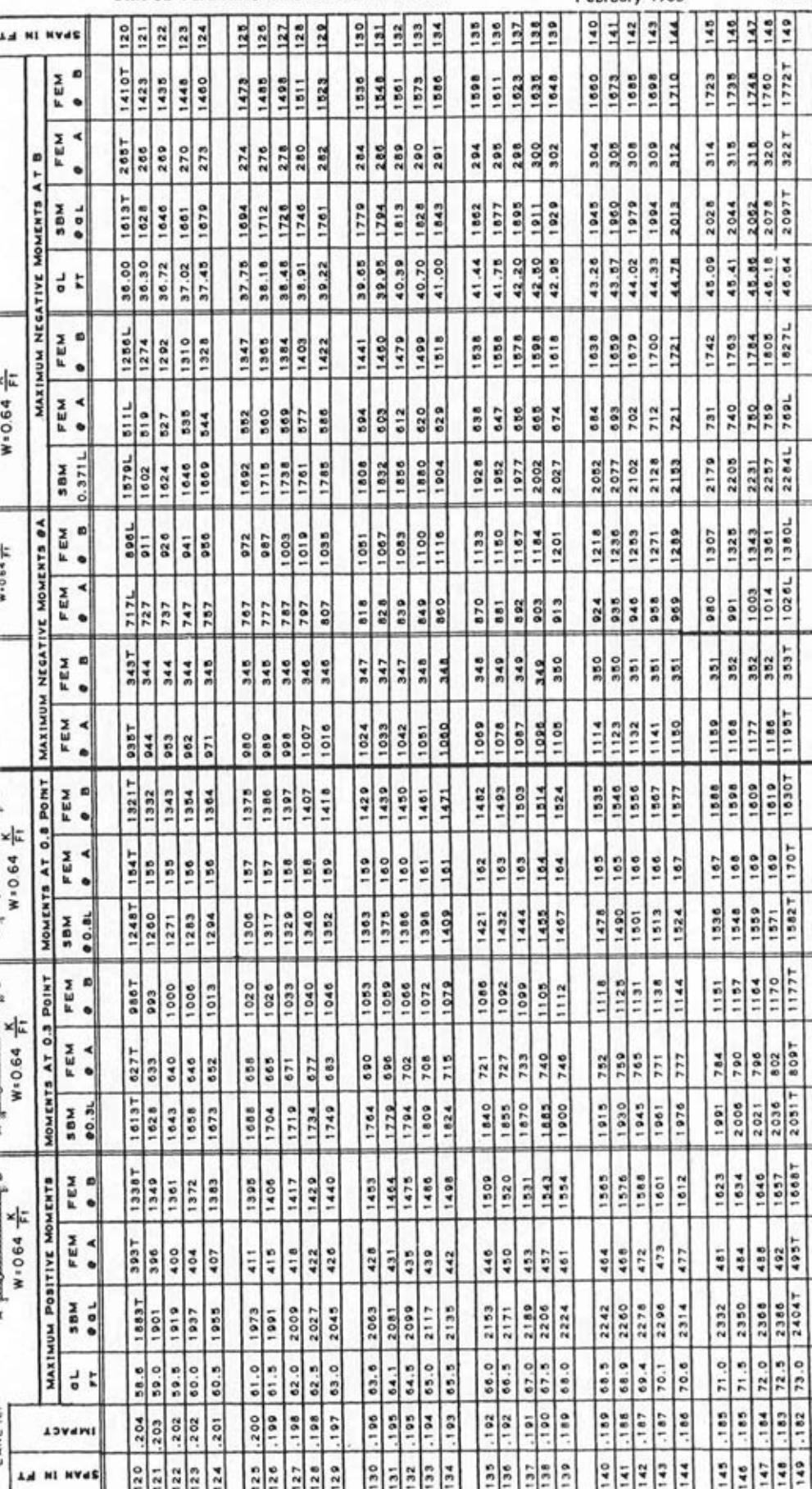
CAB = 0.143

NEGATIVE MOMENTS (kip feet)



POSITIVE MOMENTS (kip feet)

| LOADING | MAXIMUM POSITIVE MOMENTS | | | | | | | | MOMENTS AT 0.3 POINT | | | | | | | | MOMENTS AT 0.8 POINT | | | | | | | | MAXIMUM NEGATIVE MOMENTS @ A | | | | | | | |
|----------------|--------------------------|-------|------|-------|-------|------|-------|-------|----------------------|-------|-------|-------|-------|-------|-------|-------|----------------------|-------|-------|-------|-------|-------|-------|-----|------------------------------|-----|-----|-----|--|--|--|--|
| | qL | SBM | FEM | FEM | SBM | FEM | FEM | SBM | qL | FEM | FEM | FEM | SBM | FEM | FEM | SBM | qL | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | | | | |
| TRUCK (T) | 58.6 | 1883T | 393T | 1338T | 627T | 986T | 1248T | 154T | 1321T | 935T | 343T | 717L | 886L | 1579L | 811L | 1256L | 36.00 | 1613T | 2685T | 1410T | 120 | | | | | | | | | | | |
| ALTERNATIVE(A) | 59.0 | 1901 | 396 | 1349 | 628 | 993 | 1260 | 155 | 1332 | 944 | 344 | 727 | 911 | 1602 | 819 | 124 | 36.30 | 1628 | 266 | 1423 | 121 | | | | | | | | | | | |
| LANE (L) | 59.5 | 1919 | 400 | 1361 | 643 | 1000 | 1271 | 155 | 1343 | 953 | 344 | 737 | 926 | 1624 | 827 | 1292 | 36.72 | 1646 | 269 | 1435 | 122 | | | | | | | | | | | |
| | 60.0 | 1937 | 404 | 1372 | 646 | 1006 | 1283 | 156 | 1354 | 962 | 344 | 747 | 941 | 1646 | 844 | 1303 | 37.02 | 1661 | 270 | 1448 | 123 | | | | | | | | | | | |
| | 60.5 | 1955 | 407 | 1383 | 652 | 1013 | 1294 | 156 | 1364 | 971 | 345 | 757 | 956 | 1669 | 844 | 1328 | 37.45 | 1679 | 273 | 1460 | 124 | | | | | | | | | | | |
| | 61.0 | 1973 | 411 | 1395 | 658 | 1020 | 1306 | 157 | 1375 | 980 | 345 | 767 | 972 | 1692 | 852 | 1347 | 37.75 | 1694 | 274 | 1473 | 125 | | | | | | | | | | | |
| | 61.5 | 1991 | 415 | 1406 | 665 | 1026 | 1317 | 157 | 1386 | 989 | 345 | 777 | 987 | 1715 | 860 | 1355 | 38.18 | 1712 | 276 | 1485 | 126 | | | | | | | | | | | |
| | 62.0 | 2009 | 418 | 1417 | 671 | 1033 | 1329 | 158 | 1397 | 996 | 346 | 787 | 1003 | 1738 | 869 | 1364 | 38.48 | 1726 | 278 | 1498 | 127 | | | | | | | | | | | |
| | 62.5 | 2027 | 422 | 1429 | 677 | 1040 | 1340 | 158 | 1407 | 1007 | 346 | 797 | 1019 | 1761 | 877 | 1403 | 38.91 | 1746 | 280 | 1511 | 128 | | | | | | | | | | | |
| | 63.0 | 2045 | 426 | 1440 | 683 | 1046 | 1352 | 159 | 1418 | 1016 | 346 | 807 | 1035 | 1785 | 886 | 1422 | 39.22 | 1761 | 282 | 1523 | 129 | | | | | | | | | | | |
| | 63.5 | 2063 | 430 | 1453 | 690 | 1053 | 1363 | 159 | 1429 | 1024 | 347 | 818 | 1051 | 1808 | 894 | 1441 | 39.65 | 1779 | 284 | 1536 | 130 | | | | | | | | | | | |
| | 64.0 | 2081 | 431 | 1464 | 696 | 1059 | 1375 | 160 | 1439 | 1033 | 347 | 828 | 1067 | 1832 | 903 | 1450 | 39.95 | 1794 | 286 | 1548 | 131 | | | | | | | | | | | |
| | 64.5 | 2099 | 435 | 1475 | 702 | 1066 | 1386 | 160 | 1450 | 1042 | 347 | 839 | 1083 | 1856 | 912 | 1479 | 40.39 | 1813 | 289 | 1561 | 132 | | | | | | | | | | | |
| | 65.0 | 2117 | 439 | 1486 | 708 | 1072 | 1396 | 161 | 1461 | 1051 | 348 | 849 | 1100 | 1880 | 920 | 1499 | 40.70 | 1828 | 290 | 1573 | 133 | | | | | | | | | | | |
| | 65.5 | 2135 | 442 | 1498 | 715 | 1079 | 1409 | 161 | 1471 | 1060 | 348 | 860 | 1116 | 1904 | 928 | 1518 | 41.00 | 1843 | 291 | 1586 | 134 | | | | | | | | | | | |
| | 66.0 | 2224 | 461 | 1554 | 1900 | 1112 | 1407 | 164 | 1524 | 1105 | 350 | 913 | 2027 | 674 | 1618 | 42.95 | 1929 | 302 | 1648 | 139 | | | | | | | | | | | | |
| | 66.5 | 2153 | 446 | 1565 | 1915 | 1118 | 1478 | 165 | 1535 | 1114 | 360 | 924 | 2118 | 2052 | 684 | 1638 | 43.26 | 1945 | 304 | 1660 | 140 | | | | | | | | | | | |
| | 67.0 | 2171 | 450 | 1576 | 1930 | 1123 | 1490 | 165 | 1556 | 1123 | 360 | 935 | 2135 | 2077 | 693 | 1659 | 43.57 | 1960 | 305 | 1673 | 141 | | | | | | | | | | | |
| | 67.5 | 2189 | 453 | 1588 | 1945 | 1131 | 1501 | 166 | 1556 | 1132 | 361 | 946 | 1253 | 2102 | 702 | 1679 | 44.02 | 1979 | 306 | 1685 | 142 | | | | | | | | | | | |
| | 68.0 | 2206 | 457 | 1593 | 1945 | 1136 | 1513 | 166 | 1567 | 1141 | 361 | 958 | 1271 | 2128 | 712 | 1700 | 44.33 | 1994 | 309 | 1698 | 143 | | | | | | | | | | | |
| | 68.5 | 2224 | 461 | 1594 | 1954 | 1141 | 1524 | 167 | 1577 | 1150 | 361 | 969 | 1289 | 2153 | 721 | 1721 | 44.78 | 2013 | 312 | 1710 | 144 | | | | | | | | | | | |
| | 69.0 | 2242 | 464 | 1595 | 1965 | 1148 | 1536 | 167 | 1586 | 1159 | 361 | 980 | 1307 | 2179 | 731 | 1742 | 45.09 | 2026 | 314 | 1723 | 145 | | | | | | | | | | | |
| | 69.5 | 2155 | 446 | 1566 | 1916 | 1157 | 1548 | 168 | 1596 | 1168 | 362 | 991 | 1325 | 2205 | 740 | 1763 | 45.41 | 2044 | 315 | 1735 | 146 | | | | | | | | | | | |
| | 70.0 | 2260 | 466 | 1576 | 1920 | 1163 | 1556 | 168 | 1596 | 1177 | 362 | 1003 | 1343 | 2231 | 750 | 1784 | 45.86 | 2062 | 318 | 1744 | 147 | | | | | | | | | | | |
| | 70.5 | 2278 | 472 | 1588 | 1945 | 1171 | 1561 | 169 | 1597 | 1186 | 362 | 1014 | 1361 | 2257 | 759 | 1806 | 46.16 | 2078 | 320 | 1760 | 148 | | | | | | | | | | | |
| | 71.0 | 2296 | 473 | 1601 | 1961 | 1177 | 1571 | 170 | 1602 | 1197 | 362 | 1025T | 1195T | 1630T | 1026L | 1380L | 2264L | 1627L | 46.64 | 2097T | 322T | 1772T | 149 | | | | | | | | | |
| | 71.5 | 2350 | 484 | 1634 | 2008 | 970 | 1157 | 1548 | 168 | 1596 | 1168 | 362 | 991 | 1325 | 2205 | 740 | 1763 | 46.41 | 2044 | 315 | 1735 | 146 | | | | | | | | | | |
| | 72.0 | 2368 | 488 | 1646 | 2021 | 976 | 1164 | 1559 | 169 | 1609 | 1177 | 362 | 1003 | 1343 | 2231 | 750 | 1784 | 46.86 | 2062 | 318 | 1744 | 147 | | | | | | | | | | |
| | 72.5 | 2386 | 492 | 1657 | 2036 | 802 | 1170 | 1571 | 169 | 1619 | 1186 | 362 | 1014 | 1361 | 2257 | 759 | 1806 | 46.16 | 2078 | 320 | 1760 | 148 | | | | | | | | | | |
| | 73.0 | 2404T | 495T | 1668T | 2051T | 809T | 1177T | 1582T | 170T | 1620T | 1195T | 362 | 1025T | 1195T | 1630T | 1026L | 1380L | 2264L | 1627L | 46.64 | 2097T | 322T | 1772T | 149 | | | | | | | | |



ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/8 POINT (0.125L)

KAB = 7.0

CAB = 0.143

KBA = 3.419

NEGATIVE MOMENTS (kip feet)

POSITIVE MOMENTS (kip feet)

| LOADING | POSITIVE MOMENTS (kip feet) | | | | | | | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | | | | | | | | | | | | | |
|--------------------------|-----------------------------|-------------|-------------|----------|----------------------|---------------|----------|-------------|----------------------|----------|---------------|---------------|------------------------------|---------------|---------------|----------|-------------------------------|-------------|----------|------------|------------|----------|------------|------------|----------|------------|------------|----------|------------|------------|
| | MAXIMUM POSITIVE MOMENTS | | | | MOMENTS AT 0.3 POINT | | | | MOMENTS AT 0.8 POINT | | | | MAXIMUM NEGATIVE MOMENTS @ A | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | | | | | |
| IMPACT | QL ft | SBM @ QL | FEM @ QL | QL ft | SBM @ 0.3L | FEM @ 0.3L | QL ft | SBM @ QL | FEM @ QL | QL ft | SBM @ 0.8L | FEM @ 0.8L | QL ft | SBM @ 0.3L | FEM @ 0.3L | QL ft | SBM @ QL | FEM @ QL | QL ft | SBM @ B | FEM @ B |
| TRUCK (T) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALTERNATIVE (A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANE (L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAXIMUM POSITIVE MOMENTS | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | 0.3L | | | |
| IMPACT | QL ft | SBM @ QL | FEM @ QL | QL ft | SBM @ 0.3L | FEM @ 0.3L | QL ft | SBM @ QL | FEM @ QL | QL ft | SBM @ 0.8L | FEM @ 0.8L | QL ft | SBM @ 0.3L | FEM @ 0.3L | QL ft | SBM @ QL | FEM @ QL | QL ft | SBM @ B | FEM @ B |
| 140 | 1.82 | 73.5 | 2422T | 499T | 1.679T | 2065T | 815T | 1.683T | 1.594T | 1.70T | 1.640T | 1.204T | 1.353T | 1.037L | 1.398L | 2310L | 779L | 1.848L | 2112T | 46.95 | 2112T | 324T | 1.785T | 180 | | | | | | |
| 151 | 1.81 | 74.0 | 2440 | 503 | 1.690 | 2082 | 821 | 1.709 | 1.625 | 1.71 | 1.661 | 1.213 | 1.337 | 1.049 | 1.417 | 2327 | 789 | 1.870 | 47.26 | 2127 | 328 | 1.797 | 151 | | | | | | | |
| 152 | 1.81 | 74.5 | 2458 | 506 | 1.702 | 2097 | 828 | 1.710 | 1.627 | 1.71 | 1.661 | 1.222 | 1.353 | 1.050 | 1.436 | 2346 | 799 | 1.892 | 47.73 | 2146 | 330 | 1.810 | 152 | | | | | | | |
| 153 | 1.80 | 75.0 | 2476 | 510 | 1.713 | 2112 | 834 | 1.720 | 1.628 | 1.72 | 1.672 | 1.230 | 1.354 | 1.072 | 1.455 | 2364 | 809 | 1.913 | 48.04 | 2162 | 330 | 1.822 | 153 | | | | | | | |
| 154 | 1.79 | 75.5 | 2494 | 514 | 1.724 | 2127 | 840 | 1.729 | 1.630 | 1.72 | 1.682 | 1.239 | 1.354 | 1.084 | 1.474 | 2416 | 819 | 1.935 | 48.36 | 2177 | 331 | 1.835 | 154 | | | | | | | |
| 155 | 1.79 | 75.0 | 2512 | 517 | 1.735 | 2142 | 846 | 1.735 | 1.631 | 1.73 | 1.683 | 1.248 | 1.354 | 1.096 | 1.493 | 2448 | 829 | 1.958 | 48.82 | 2196 | 334 | 1.847 | 155 | | | | | | | |
| 156 | 1.78 | 76.4 | 2530 | 521 | 1.746 | 2157 | 853 | 1.742 | 1.633 | 1.74 | 1.703 | 1.257 | 1.355 | 1.108 | 1.512 | 2473 | 839 | 1.980 | 49.14 | 2212 | 336 | 1.859 | 156 | | | | | | | |
| 157 | 1.77 | 76.9 | 2548 | 524 | 1.756 | 2172 | 859 | 1.748 | 1.634 | 1.74 | 1.713 | 1.266 | 1.355 | 1.120 | 1.531 | 2500 | 850 | 2.002 | 49.45 | 2227 | 337 | 1.872 | 157 | | | | | | | |
| 158 | 1.77 | 77.6 | 2556 | 526 | 1.771 | 2187 | 865 | 1.753 | 1.635 | 1.75 | 1.724 | 1.275 | 1.355 | 1.132 | 1.551 | 2526 | 860 | 2.025 | 49.95 | 2247 | 340 | 1.884 | 158 | | | | | | | |
| 159 | 1.76 | 78.1 | 2564 | 530 | 1.782 | 2202 | 871 | 1.741 | 1.637 | 1.75 | 1.734 | 1.284 | 1.355 | 1.144 | 1.571 | 2555 | 870 | 2.048 | 50.24 | 2262 | 342 | 1.897 | 159 | | | | | | | |
| 160 | 1.75 | 78.6 | 2602 | 533 | 1.793 | 2218 | 878 | 1.750 | 1.646 | 1.76 | 1.745 | 1.293 | 1.356 | 1.156 | 1.590 | 2584 | 881 | 2.070 | 50.56 | 2278 | 343 | 1.909 | 160 | | | | | | | |
| 161 | 1.75 | 79.1 | 2620 | 537 | 1.804 | 2233 | 884 | 1.754 | 1.651 | 1.76 | 1.755 | 1.302 | 1.356 | 1.168 | 1.610 | 2612 | 891 | 2.093 | 51.04 | 2297 | 346 | 1.921 | 161 | | | | | | | |
| 162 | 1.74 | 79.5 | 2638 | 541 | 1.816 | 2248 | 890 | 1.761 | 1.651 | 1.77 | 1.766 | 1.311 | 1.356 | 1.181 | 1.630 | 2640 | 902 | 2.116 | 51.35 | 2312 | 348 | 1.934 | 162 | | | | | | | |
| 163 | 1.74 | 80.0 | 2656 | 544 | 1.827 | 2262 | 897 | 1.767 | 1.657 | 1.78 | 1.776 | 1.320 | 1.356 | 1.193 | 1.651 | 2669 | 913 | 2.139 | 51.57 | 2326 | 349 | 1.946 | 163 | | | | | | | |
| 164 | 1.73 | 80.5 | 2674 | 546 | 1.838 | 2278 | 903 | 1.773 | 1.662 | 1.78 | 1.786 | 1.329 | 1.357 | 1.206 | 1.671 | 2697 | 923 | 2.163 | 52.15 | 2347 | 353 | 1.959 | 164 | | | | | | | |
| 165 | 1.72 | 81.0 | 2692 | 552 | 1.840 | 2293 | 909 | 1.780 | 1.666 | 1.79 | 1.797 | 1.338 | 1.357 | 1.218 | 1.691 | 2726 | 934 | 2.186 | 52.47 | 2363 | 364 | 1.971 | 165 | | | | | | | |
| 166 | 1.72 | 81.5 | 2710 | 555 | 1.840 | 2308 | 915 | 1.786 | 1.670 | 1.79 | 1.807 | 1.347 | 1.357 | 1.231 | 1.712 | 2755 | 945 | 2.210 | 52.79 | 2378 | 366 | 1.983 | 166 | | | | | | | |
| 167 | 1.71 | 82.0 | 2728 | 559 | 1.851 | 2323 | 922 | 1.793 | 1.679 | 1.80 | 1.817 | 1.356 | 1.358 | 1.243 | 1.732 | 2784 | 956 | 2.233 | 53.27 | 2398 | 367 | 2.045 | 171 | | | | | | | |
| 168 | 1.71 | 82.5 | 2746 | 563 | 1.863 | 2339 | 928 | 1.800 | 1.681 | 1.80 | 1.826 | 1.365 | 1.358 | 1.256 | 1.753 | 2813 | 967 | 2.257 | 53.56 | 2413 | 368 | 2.058 | 172 | | | | | | | |
| 169 | 1.70 | 83.0 | 2764 | 566 | 1.864 | 2354 | 934 | 1.805 | 1.684 | 1.81 | 1.836 | 1.374 | 1.358 | 1.269 | 1.774 | 2843 | 978 | 2.281 | 53.91 | 2429 | 362 | 2.070 | 173 | | | | | | | |
| 170 | 1.69 | 83.5 | 2782 | 570 | 1.905 | 2369 | 941 | 1.812 | 1.682 | 1.82 | 1.849 | 1.383 | 1.358 | 1.281 | 1.795 | 2872 | 989 | 2.305 | 54.23 | 2445 | 363 | 2.093 | 170 | | | | | | | |
| 171 | 1.69 | 84.0 | 2800 | 574 | 1.916 | 2384 | 947 | 1.818 | 1.683 | 1.82 | 1.859 | 1.392 | 1.359 | 1.294 | 1.816 | 2902 | 1.000 | 2.329 | 54.72 | 2464 | 367 | 2.105 | 171 | | | | | | | |
| 172 | 1.68 | 84.5 | 2818 | 577 | 1.927 | 2399 | 953 | 1.825 | 1.684 | 1.83 | 1.869 | 1.401 | 1.359 | 1.307 | 1.837 | 2932 | 1.011 | 2.353 | 55.04 | 2480 | 368 | 2.127 | 172 | | | | | | | |
| 173 | 1.68 | 84.9 | 2836 | 581 | 1.938 | 2414 | 959 | 1.831 | 1.686 | 1.83 | 1.880 | 1.410 | 1.359 | 1.320 | 1.859 | 2962 | 1.023 | 2.376 | 55.36 | 2499 | 370 | 2.146 | 173 | | | | | | | |
| 174 | 1.67 | 85.4 | 2854 | 584 | 1.950 | 2420 | 966 | 1.837 | 1.687 | 1.84 | 1.890 | 1.419 | 1.359 | 1.333 | 1.880 | 2992 | 1.034 | 2.402 | 55.85 | 2515 | 373 | 2.082 | 174 | | | | | | | |
| 175 | 1.67 | 86.1 | 2872 | 588 | 1.963 | 2444 | 972 | 1.844 | 1.692 | 1.85 | 1.900 | 1.428 | 1.360 | 1.346 | 1.902 | 3022 | 1.045 | 2.427 | 56.17 | 2531 | 375 | 2.095 | 175 | | | | | | | |
| 176 | 1.66 | 86.6 | 2890 | 590 | 1.974 | 2460 | 978 | 1.850 | 1.693 | 1.86 | 1.905 | 1.437 | 1.360 | 1.350 | 1.924 | 3052 | 1.057 | 2.452 | 56.50 | 2548 | 376 | 2.107 | 176 | | | | | | | |
| 177 | 1.66 | 87.1 | 2908 | 593 | 1.985 | 2475 | 985 | 1.856 | 1.695 | 1.86 | 1.921 | 1.446 | 1.360 | 1.373 | 1.946 | 3083 | 1.068 | 2.476 | 56.82 | 2562 | 378 | 2.119 | 177 | | | | | | | |
| 178 | 1.65 | 87.6 | 2926 | 597 | 1.997 | 2490 | 991 | 1.863 | 1.696 | 1.86 | 1.931 | 1.455 | 1.360 | 1.386 | 1.956 | 3114 | 1.080 | 2.501 | 57.32 | 2582 | 381 | 2.132 | 178 | | | | | | | |
| 179 | 1.64 | 88.1 | 2944T | 600T | 2.008T | 2505T | 997T | 1.869T | 1.697T | 1.867T | 1.936T | 1.464T | 1.360T | 1.386T | 1.960T | 3145L | 1.081L | 2.527L | 57.64 | 2597T | 383T | 2.144T | 179 | | | | | | | |

February 1965

ONE LANE LIVE LOAD (H20-S16-44)

(IMPACT NOT INCLUDED)

HINGE AT 1/8 POINT (0.125L)

 $K_{AB} = .070$
 $CAB = 7.0$
 $CBA = 0.143$

POSITIVE MOMENTS (kip feet)

| LOADING | POSITIVE MOMENTS (kip feet) | | | | | | NEGATIVE MOMENTS (kip feet) | | | | | |
|-----------------|-----------------------------|----------|-------------|------------|------------|--------------------------|-----------------------------|----------|---------------|------------|------------|------------------------------|
| | GL PT | SL PT | SBM @ GL | FEM @ A | FEM @ B | MAXIMUM POSITIVE MOMENTS | GL PT | SL PT | SBM @ 0.3L | FEM @ A | FEM @ B | MAXIMUM NEGATIVE MOMENTS @ A |
| TRUCK (T) | 164 | 88.0 | 2962T | 604T | 2019T | 2620T | 1003T | 1376T | 1959T | 1877T | 1952T | 1472T |
| ALTERNATIVE (A) | 163 | 89.1 | 2980T | 608T | 2030T | 2555 | 1010 | 1382 | 1951 | 1882 | 1962 | 1481 |
| LANE (L) | 163 | 91.2 | 3469L | 1194L | 2555L | 2550 | 1016 | 1388 | 1952 | 1892 | 1972 | 1490 |
| | 162 | 91.7 | 3503 | 1206 | 2880 | 2868 | 1022 | 1395 | 1974 | 189 | 1983 | 1499 |
| | 162 | 92.2 | 3536 | 1218 | 2668 | 2660 | 1029 | 1401 | 1985 | 190 | 1993 | 1508 |
| | 161 | 92.7 | 3570 | 1231 | 2631 | 2596 | 1035 | 1407 | 1997 | 190 | 2003 | 1817 |
| | 161 | 93.2 | 3605 | 1243 | 2667 | 2611 | 1041 | 1414 | 2008 | 191 | 2014 | 1826 |
| | 160 | 93.7 | 3639 | 1255 | 2693 | 2626 | 1048 | 1420 | 2020 | 192 | 2024 | 1835 |
| | 160 | 94.2 | 3674 | 1266 | 2709 | 2641 | 1054 | 1426 | 2031 | 192 | 2034 | 1844 |
| | 159 | 94.7 | 3708 | 1281 | 2735 | 2666 | 1060 | 1433 | 2043 | 193 | 2044 | 1853 |
| | 159 | 95.2 | 3743 | 1293 | 2761 | 2671 | 1066 | 1439 | 2054 | 193 | 2055 | 1862 |
| | 158 | 95.7 | 3778 | 1306 | 2787 | 2687 | 1073T | 1449T | 2065 | 194 | 2065 | 1871 |
| | 158 | 96.2 | 3813 | 1319 | 2814 | 3232L | 1452L | 2677L | 2077 | 195 | 2075 | 1880 |
| | 157 | 96.7 | 3848 | 1332 | 2840 | 3233 | 1466 | 2692 | 2089 | 195 | 2085 | 1889 |
| | 157 | 97.2 | 3884 | 1345 | 2867 | 3222 | 1479 | 2628 | 2100 | 196 | 2096 | 1898 |
| | 156 | 97.7 | 3919 | 1356 | 2894 | 3202 | 1493 | 2653 | 2112 | 196 | 2106 | 1907 |
| | 156 | 98.2 | 3955 | 1371 | 2921 | 3322 | 1507 | 2679 | 2124 | 197 | 2116 | 1916 |
| | 155 | 98.7 | 3991 | 1384 | 2948 | 3353 | 1521 | 2705 | 2135 | 197 | 2126 | 1926 |
| | 155 | 99.2 | 4027 | 1397 | 2975 | 3383 | 1534 | 2731 | 2147 | 198 | 2137 | 1934 |
| | 154 | 99.7 | 4064 | 1410 | 3002 | 3413 | 1546 | 2757 | 2160 | 199 | 2147 | 1943 |
| | 154 | 100.2 | 4100 | 1424 | 3030 | 3444 | 1562 | 2783 | 2170 | 199 | 2157 | 1952 |
| | 153 | 100.7 | 4137 | 1437 | 3037 | 3475 | 1576 | 2810 | 2181 | 200 | 2167 | 1961 |
| | 153 | 101.2 | 4173 | 1451 | 3055 | 3506 | 1591 | 2836 | 2193 | 200 | 2178 | 1970 |
| | 152 | 101.7 | 4210 | 1464 | 3113 | 3537 | 1605 | 2863 | 2204 | 201 | 2188 | 1979 |
| | 152 | 102.2 | 4247 | 1476 | 3141 | 3568 | 1610 | 2889 | 2216 | 202 | 2198 | 1986 |
| | 152 | 102.7 | 4284 | 1491 | 3169 | 3599 | 1633 | 2916 | 2227 | 202 | 2208 | 1997 |
| | 151 | 103.2 | 4322 | 1505 | 3197 | 3630 | 1648 | 2943 | 2239 | 203 | 2218 | 2005 |
| | 151 | 103.7 | 4359 | 1519 | 3226 | 3662 | 1662 | 2970 | 2250 | 203 | 2229 | 2015 |
| | 150 | 104.2 | 4397 | 1533 | 3254 | 3694 | 1677 | 2998 | 2262 | 204 | 2239 | 2024 |
| | 150 | 104.7 | 4435L | 1546L | 3283L | 3725L | 1691L | 3025L | 2273T | 205T | 2249T | 1733T |
| | | | | | | | | | 307T | 1733T | 2273T | 1733T |

| LOADING | | POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | | | |
|-----------------------|-----------|-----------------------------|------|------|------|------|------|------|--------|------|------|------|------|-----------------------------|------|------|--------|------|-------|------|------|------|-----|-----|-----|-----|------|-----|
| IMPACT SPANN IN | TRUCK (T) | 0.3L | | | | | | 0.8L | | | | | | 0.3L | | | | | | 0.8L | | | | | | | | |
| | | BL | SBM | @ BL | FEM | FEM | @ A | SBM | @ 0.3L | FEM | FEM | @ B | FEM | FEM | @ A | SBM | @ 0.3L | FEM | FEM | @ B | SBM | @ BL | FEM | FEM | @ A | SBM | @ BL | FEM |
| 30 | 300 | 14.0 | 314A | 55A | 231A | 274A | 93A | 167A | 211A | 20A | 221A | 142A | 49A | 84L | 58L | 194L | 39L | 150L | 9.40 | 280A | 38A | 241A | 30 | | | | | |
| 31 | 300 | 14.5 | 326 | 57 | 239 | 284 | 97 | 172 | 219 | 21 | 228 | 147 | 49 | 88 | 62 | 203 | 41 | 157 | 9.80 | 291A | 40A | 249A | 31 | | | | | |
| 32 | 300 | 15.0 | 337 | 59 | 247 | 294 | 100 | 176 | 227 | 21 | 235 | 152 | 49 | 92 | 66 | 212 | 43 | 164 | 6.62 | 243T | 76T | 261T | 32 | | | | | |
| 33 | 300 | 15.5 | 349 | 61 | 255 | 304 | 104 | 181 | 234 | 21 | 242 | 158A | 50A | 95 | 70 | 221 | 45 | 171 | 6.96 | 257 | 77 | 274 | 33 | | | | | |
| 34 | 300 | 16.0 | 361 | 63 | 262 | 314 | 108 | 185 | 242 | 22 | 249 | 164T | 194T | 99 | 74 | 231 | 48 | 178 | 7.28 | 270 | 78 | 287 | 34 | | | | | |
| 35 | 300 | 16.5 | 373 | 65 | 270 | 324A | 111A | 190A | 250 | 22 | 256 | 171 | 203 | 103 | 79 | 240 | 50 | 186 | 7.59 | 283 | 79 | 301 | 35 | | | | | |
| 36 | 300 | 17.0 | 385 | 67 | 278 | 349T | 108T | 298T | 257 | 22 | 263 | 178 | 210 | 107 | 83 | 250 | 52 | 194 | 7.96 | 298 | 81 | 314 | 36 | | | | | |
| 37 | 300 | 17.5 | 397 | 69 | 285 | 363 | 113 | 308 | 265 | 23 | 270 | 185 | 217 | 111 | 88 | 259 | 55 | 201 | 8.25 | 312 | 87 | 327 | 37 | | | | | |
| 38 | 300 | 18.0 | 409 | 72 | 293 | 376 | 117 | 317 | 273 | 23 | 277 | 192 | 224 | 115 | 93 | 269 | 57 | 209 | 8.59 | 327 | 94 | 340 | 38 | | | | | |
| 39 | 300 | 18.5 | 421 | 73 | 301 | 390 | 122 | 326 | 280 | 23 | 284 | 199 | 230 | 119 | 97 | 279 | 60 | 217 | 8.93 | 342 | 100 | 353 | 39 | | | | | |
| 40 | 300 | 19.0 | 433 | 76 | 308 | 403 | 126 | 336 | 288 | 24 | 291 | 207 | 235 | 123 | 103 | 289 | 63 | 225 | 9.24 | 356 | 106 | 365 | 40 | | | | | |
| 41 | 300 | 19.5 | 445 | 78 | 316 | 418 | 131 | 350 | 296 | 24 | 298 | 214 | 240 | 128 | 108 | 300 | 65 | 234 | 9.28 | 340 | 111 | 376 | 41 | | | | | |
| 42 | 299 | 19.9 | 457 | 80 | 324 | 433 | 135 | 364 | 303 | 24 | 305 | 221 | 245 | 132 | 113 | 310 | 68 | 242 | 8.61 | 355 | 113 | 391 | 42 | | | | | |
| 43 | 298 | 20.5 | 469 | 82 | 331 | 449 | 140 | 377 | 311 | 25 | 312 | 229 | 249 | 136 | 118 | 321 | 71 | 250 | 8.94 | 370 | 114 | 406 | 43 | | | | | |
| 44 | 296 | 20.9 | 481A | 84A | 339A | 464 | 144 | 350 | 319 | 25 | 319 | 235 | 254 | 141 | 124 | 332 | 74 | 259 | 9.28 | 386 | 115 | 421 | 44 | | | | | |
| 45 | 294 | 21.1 | 537T | 119T | 435T | 479 | 149 | 403 | 326 | 25 | 325 | 244 | 257 | 145 | 130 | 342 | 77 | 268 | 9.58 | 400 | 116 | 435 | 45 | | | | | |
| 46 | 292 | 21.6 | 555 | 122 | 449 | 494 | 154 | 445 | 334 | 26 | 332 | 251 | 261 | 150 | 136 | 354 | 80 | 277 | 9.94 | 416 | 117 | 450 | 46 | | | | | |
| 47 | 291 | 22.0 | 573 | 125 | 463 | 509 | 159 | 427 | 342 | 26 | 339 | 259 | 265 | 154 | 142 | 365 | 83 | 286 | 10.25 | 430 | 118 | 464 | 47 | | | | | |
| 48 | 289 | 22.5 | 591 | 128 | 477 | 524 | 164 | 430 | 349 | 26 | 346 | 266 | 268 | 159 | 148 | 376 | 86 | 295 | 10.61 | 446 | 120 | 478 | 48 | | | | | |
| 49 | 287 | 23.0 | 609 | 131 | 491 | 539 | 168 | 450 | 357 | 27 | 353 | 274 | 271 | 164 | 154 | 388 | 89 | 304 | 10.93 | 461 | 121 | 493 | 49 | | | | | |
| 50 | 286 | 23.4 | 627 | 134 | 505 | 554 | 173 | 461 | 365 | 27 | 359 | 282 | 274 | 168 | 160 | 399 | 92 | 313 | 11.25 | 477 | 122 | 507 | 50 | | | | | |
| 51 | 284 | 23.9 | 645 | 137 | 519 | 570 | 178 | 472 | 372 | 27 | 366 | 289 | 276 | 173 | 167 | 411 | 95 | 323 | 11.58 | 492 | 123 | 521 | 51 | | | | | |
| 52 | 282 | 24.4 | 663 | 139 | 532 | 585 | 183 | 483 | 380 | 28 | 373 | 297 | 279 | 178 | 173 | 423 | 99 | 333 | 11.96 | 509 | 125 | 535 | 52 | | | | | |
| 53 | 281 | 24.0 | 681 | 143 | 556 | 600 | 188 | 493 | 388 | 28 | 380 | 305 | 281 | 183 | 180 | 435 | 102 | 342 | 12.30 | 524 | 126 | 550 | 53 | | | | | |
| 54 | 279 | 25.4 | 699 | 146 | 559 | 615 | 193 | 504 | 396A | 28A | 387A | 313 | 284 | 188 | 187 | 447 | 105 | 352 | 12.64 | 540 | 127 | 564 | 54 | | | | | |
| 55 | 278 | 25.8 | 717 | 149 | 572 | 630 | 198 | 514 | 499T | 111T | 573T | 320 | 286 | 193 | 194 | 460 | 109 | 362 | 12.98 | 555 | 129 | 578 | 55 | | | | | |
| 56 | 276 | 26.3 | 734 | 152 | 585 | 645 | 203 | 524 | 511 | 112 | 586 | 328 | 288 | 198 | 201 | 472 | 112 | 372 | 13.33 | 571 | 130 | 591 | 56 | | | | | |
| 57 | 275 | 26.8 | 752 | 155 | 598 | 660 | 208 | 534 | 522 | 112 | 599 | 336 | 290 | 203 | 208 | 485 | 116 | 383 | 13.68 | 587 | 131 | 605 | 57 | | | | | |
| 58 | 273 | 27.3 | 770 | 158 | 611 | 675 | 213 | 543 | 534 | 112 | 612 | 343 | 292 | 208 | 215 | 498 | 120 | 393 | 14.04 | 603 | 133 | 619 | 58 | | | | | |
| 59 | 272 | 27.8 | 788T | 161T | 624T | 690T | 219T | 553T | 545T | 112T | 625T | 351T | 294T | 213L | 223L | 511L | 123L | 404L | 14.40 | 620T | 1440 | 633T | 59 | | | | | |

| IMPACT SPANNING FEET | MAXIMUM POSITIVE MOMENTS W = 0.64 K/Ft. | POSITIVE MOMENTS (KIP FEET) | | | | | | NEGATIVE MOMENTS (KIP FEET) | | | | | | MAXIMUM NEGATIVE MOMENTS AT B W = 0.64 K/Ft. |
|---|--|-----------------------------|-------------|------------|------------|---------------|------------|-----------------------------|---------------|------------|------------|-----------------|------------|---|
| | | aL FT | SBM @ aL | FEM @ A | FEM @ B | SBM @ 0.3L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ 0.377L | FEM @ A | FEM @ B |
| ONE LANE LIVE LOAD (HS20-44) <small>(IMPACT NOT INCLUDED) HINGE AT 1/9 POINT (0.111L) K_AB = 0.053 C_AB = 8.000 K_BA = 3.368 C_BA = 0.125</small> | | | | | | | | | | | | | | |
| TRUCK (T) | | | | | | | | | | | | | | |
| ALTERNATIVE (A) | A | 10 | 324 | 18 | 24 | 324 | 18 | 24 | 324 | 18 | 24 | 324 | 18 | 24 |
| LANE (L) | A | 10 | 324 | 18 | 24 | 324 | 18 | 24 | 324 | 18 | 24 | 324 | 18 | 24 |
| | | | | | | | | | | | | | | |
| MAXIMUM POSITIVE MOMENTS MOMENTS AT 0.3 POINT MOMENTS AT 0.8 POINT MOMENTS AT 0.3 POINT MOMENTS AT 0.8 POINT | | | | | | | | | | | | | | |
| 60 | 270 | 28.3 | 806T | 164T | 637T | 706T | 224T | 562T | 557T | 112T | 638T | 359T | 295T | 219L |
| 61 | 269 | 28.7 | 824 | 167 | 650 | 721 | 229 | 572 | 568 | 112 | 651 | 367 | 297 | 224 |
| 62 | 267 | 29.3 | 842 | 170 | 663 | 736 | 234 | 581 | 580 | 113 | 664 | 375 | 298 | 229 |
| 63 | 266 | 29.7 | 860 | 173 | 675 | 751 | 239 | 590 | 591 | 113 | 677 | 382 | 300 | 235 |
| 64 | 265 | 30.2 | 878 | 176 | 688 | 766 | 244 | 599 | 603 | 113 | 689 | 390 | 301 | 240 |
| 65 | 263 | 30.7 | 896 | 179 | 701 | 781 | 249 | 608 | 614 | 113 | 702 | 398 | 303 | 246 |
| 66 | 262 | 31.2 | 914 | 182 | 713 | 796 | 255 | 617 | 626 | 113 | 715 | 406 | 304 | 251 |
| 67 | 260 | 31.7 | 932 | 185 | 726 | 811 | 260 | 625 | 637 | 114 | 727 | 414 | 305 | 257 |
| 68 | 259 | 32.2 | 950 | 188 | 738 | 827 | 265 | 634 | 649 | 114 | 740 | 422 | 307 | 263 |
| 69 | 258 | 32.6 | 967 | 191 | 751 | 842 | 270 | 643 | 660 | 114 | 752 | 429 | 308 | 269 |
| 70 | 256 | 33.1 | 985 | 195 | 763 | 857 | 276 | 651 | 672 | 114 | 764 | 437 | 309 | 274 |
| 71 | 255 | 33.6 | 1003 | 198 | 775 | 872 | 281 | 659 | 684 | 115 | 776 | 445 | 310 | 280 |
| 72 | 254 | 34.1 | 1021 | 200 | 788 | 887 | 286 | 668 | 695 | 115 | 789 | 453 | 311 | 286 |
| 73 | 253 | 34.6 | 1039 | 204 | 800 | 902 | 291 | 670 | 707 | 115 | 801 | 461 | 312 | 292 |
| 74 | 251 | 35.1 | 1057 | 207 | 812 | 917 | 297 | 684 | 718 | 116 | 813 | 469 | 313 | 298 |
| 75 | 250 | 35.5 | 1075 | 210 | 824 | 932 | 302 | 693 | 730 | 116 | 825 | 477 | 314 | 304 |
| 76 | 249 | 36.0 | 1093 | 213 | 836 | 948 | 307 | 701 | 741 | 116 | 837 | 485 | 315 | 311 |
| 77 | 248 | 36.6 | 1111 | 216 | 849 | 963 | 312 | 709 | 753 | 116 | 849 | 493 | 316 | 317 |
| 78 | 246 | 37.0 | 1129 | 219 | 861 | 978 | 318 | 717 | 764 | 117 | 861 | 500 | 316 | 323 |
| 79 | 245 | 37.5 | 1147 | 222 | 873 | 993 | 323 | 725 | 776 | 117 | 873 | 508 | 317 | 329 |
| 80 | 244 | 38.0 | 1165 | 225 | 885 | 1008 | 328 | 733 | 787 | 117 | 885 | 516 | 318 | 336 |
| 81 | 243 | 38.5 | 1183 | 229 | 897 | 1023 | 334 | 741 | 799 | 118 | 896 | 524 | 319 | 342 |
| 82 | 241 | 38.9 | 1201 | 232 | 909 | 1038 | 339 | 749 | 810 | 118 | 908 | 532 | 320 | 349 |
| 83 | 240 | 39.5 | 1219 | 234 | 922 | 1053 | 344 | 756 | 822 | 118 | 920 | 540 | 321 | 355 |
| 84 | 239 | 40.0 | 1237 | 237 | 934 | 1068 | 350 | 764 | 833 | 119 | 932 | 548 | 321 | 362 |
| 85 | 238 | 40.5 | 1255 | 241 | 946 | 1084 | 355 | 772 | 845 | 119 | 943 | 556 | 322 | 369 |
| 86 | 237 | 40.9 | 1272 | 244 | 957 | 1099 | 360 | 780 | 856 | 119 | 955 | 564 | 322 | 375 |
| 87 | 236 | 41.4 | 1290 | 247 | 969 | 1114 | 366 | 787 | 868 | 120 | 966 | 572 | 323 | 382 |
| 88 | 235 | 41.9 | 1308 | 250 | 981 | 1129 | 371 | 795 | 879 | 120 | 978 | 580 | 324 | 389 |
| 89 | 234 | 42.5 | 1326T | 253T | 994T | 1144T | 376T | 803T | 891T | 120T | 990T | 589T | 324T | 396L |

| LOADING | | POSITIVE MOMENTS (KIP FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP FEET) | | | | | | | | | | | | |
|-----------------|--------|-----------------------------|------|----------------------|-------|----------------------|-------|------------------------------|------|------------------------------|------|---------|------|-----------------------------|-------|---------|-------|---------|-------|--------------|-------|---------|-------|---------|-------|-------|
| | | HINGE AT 1/9 POINT (0.111L) | | | | | | W=0.64 K/FT. | | | | | | W=0.64 K/FT. | | | | | | W=0.64 K/FT. | | | | | | |
| IMPACT FACT | PAN IN | MAXIMUM POSITIVE MOMENTS | | MOMENTS AT 0.3 POINT | | MOMENTS AT 0.6 POINT | | MAXIMUM NEGATIVE MOMENTS @ A | | MAXIMUM NEGATIVE MOMENTS @ B | | FEM @ A | | FEM @ B | | FEM @ A | | FEM @ B | | FEM @ A | | FEM @ B | | FEM @ A | | |
| | | al | bl | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | al | bl | SBM | FEM | al | bl | SBM | FEM | al | bl | SBM | FEM | al | bl | |
| TRUCK (T) | A | 1344T | 256T | 1006T | 1159T | 382T | 810T | 902T | 121T | 1001T | 595T | 325T | 410 | 518L | 989L | 265L | 1007 | 271 | 808 | 25.56 | 1127T | 163T | 1046T | 90 | | |
| ALTERNATIVE (A) | A | 1362 | 259 | 1017 | 1174 | 387 | 818 | 914 | 121 | 1012 | 603 | 325 | 410 | 541 | 1025 | 276 | 822 | 26.22 | 1158 | 186 | 1059 | 185 | 1059 | 1059 | 1059 | 1059 |
| LANE (L) | A | 1380 | 262 | 1029 | 1189 | 392 | 825 | 925 | 122 | 1024 | 611 | 326 | 417 | 553 | 1043 | 282 | 837 | 26.60 | 1175 | 188 | 1085 | 193 | 1085 | 1085 | 1085 | 1085 |
| W=0.64 K/FT. | | 1398 | 266 | 1041 | 1205 | 398 | 833 | 937 | 122 | 1035 | 619 | 326 | 424 | 565 | 1062 | 287 | 852 | 26.98 | 1192 | 189 | 1098 | 194 | 1098 | 1098 | 1098 | 1098 |
| W=0.64 K/FT. | | 1416 | 269 | 1053 | 1220 | 403 | 840 | 948 | 122 | 1047 | 627 | 327 | 431 | 577 | 1080 | 293 | 867 | 27.36 | 1209 | 191 | 1111 | 195 | 1111 | 1111 | 1111 | 1111 |
| W=0.64 K/FT. | | 1434 | 272 | 1064 | 1235 | 408 | 848 | 960 | 123 | 1058 | 635 | 327 | 438 | 589 | 1099 | 299 | 883 | 27.74 | 1226 | 193 | 1124 | 196 | 1124 | 1124 | 1124 | 1124 |
| W=0.64 K/FT. | | 1452 | 274 | 1077 | 1250 | 414 | 855 | 972 | 123 | 1069 | 643 | 328 | 445 | 601 | 1117 | 305 | 898 | 28.13 | 1243 | 195 | 1137 | 197 | 1137 | 1137 | 1137 | 1137 |
| W=0.64 K/FT. | | 1470 | 278 | 1089 | 1265 | 419 | 863 | 983 | 123 | 1081 | 651 | 328 | 453 | 614 | 1136 | 310 | 914 | 28.42 | 1258 | 196 | 1150 | 198 | 1150 | 1150 | 1150 | 1150 |
| W=0.64 K/FT. | | 1488 | 281 | 1100 | 1280 | 425 | 870 | 995 | 124 | 1092 | 659 | 329 | 460 | 626 | 1155 | 316 | 929 | 28.81 | 1275 | 198 | 1163 | 199 | 1163 | 1163 | 1163 | 1163 |
| W=0.64 K/FT. | | 1506 | 284 | 1112 | 1295 | 430 | 878 | 1006 | 124 | 1103 | 667 | 329 | 468 | 634 | 1173 | 322 | 937 | 29.17 | 1292 | 200 | 1176 | 200 | 1176 | 1176 | 1176 | 1176 |
| W=0.64 K/FT. | | 1524 | 287 | 1124 | 1310 | 435 | 885 | 1018 | 125 | 1114 | 675 | 330 | 475 | 649 | 1184 | 322 | 945 | 29.20 | 1292 | 200 | 1176 | 200 | 1176 | 1176 | 1176 | 1176 |
| W=0.64 K/FT. | | 1542 | 291 | 1135 | 1326 | 441 | 892 | 1029 | 125 | 1126 | 683 | 330 | 483 | 652 | 1194 | 328 | 961 | 29.59 | 1310 | 202 | 1189 | 201 | 1189 | 1189 | 1189 | 1189 |
| W=0.64 K/FT. | | 1560 | 294 | 1147 | 1341 | 446 | 900 | 1041 | 125 | 1137 | 691 | 331 | 490 | 665 | 1213 | 334 | 977 | 29.89 | 1314 | 203 | 1202 | 202 | 1202 | 1202 | 1202 | 1202 |
| W=0.64 K/FT. | | 1578 | 297 | 1159 | 1356 | 451 | 907 | 1052 | 126 | 1148 | 699 | 331 | 498 | 678 | 1233 | 340 | 993 | 30.28 | 1342 | 205 | 1215 | 203 | 1215 | 1215 | 1215 | 1215 |
| W=0.64 K/FT. | | 1596 | 299 | 1171 | 1371 | 457 | 914 | 1064 | 126 | 1159 | 706 | 332 | 506 | 691 | 1253 | 347 | 1009 | 30.68 | 1359 | 207 | 1228 | 204 | 1228 | 1228 | 1228 | 1228 |
| W=0.64 K/FT. | | 1614 | 302 | 1183 | 1386 | 462 | 922 | 1075 | 127 | 1170 | 714 | 332 | 513 | 704 | 1273 | 353 | 1026 | 31.08 | 1376 | 209 | 1240 | 205 | 1253 | 1253 | 1253 | 1253 |
| W=0.64 K/FT. | | 1632 | 306 | 1194 | 1401 | 468 | 929 | 1087 | 127 | 1181 | 722 | 332 | 521 | 718 | 1293 | 359 | 1042 | 31.38 | 1391 | 210 | 1253 | 206 | 1266 | 1266 | 1266 | 1266 |
| W=0.64 K/FT. | | 1650 | 309 | 1206 | 1416 | 473 | 936 | 1098 | 128 | 1192 | 730 | 333 | 529 | 731 | 1313 | 365 | 1059 | 31.78 | 1409 | 212 | 1279 | 214 | 1279 | 1279 | 1279 | 1279 |
| W=0.64 K/FT. | | 1668 | 312 | 1229 | 1446 | 484 | 951 | 1121 | 128 | 1215 | 746 | 334 | 545 | 759 | 1354 | 378 | 1092 | 32.16 | 1426 | 214 | 1292 | 215 | 1292 | 1292 | 1292 | 1292 |
| W=0.64 K/FT. | | 1686 | 315 | 1229 | 1446 | 484 | 951 | 1121 | 128 | 1215 | 746 | 334 | 545 | 759 | 1354 | 378 | 1092 | 32.48 | 1442 | 215 | 1305 | 217 | 1305 | 1305 | 1305 | 1305 |
| W=0.64 K/FT. | | 1704 | 319 | 1241 | 1462 | 489 | 958 | 1133 | 129 | 1226 | 754 | 334 | 553 | 773 | 1374 | 385 | 1109 | 32.89 | 1459 | 217 | 1317 | 219 | 1317 | 1317 | 1317 | 1317 |
| W=0.64 K/FT. | | 1722 | 322 | 1252 | 1477 | 495 | 965 | 1144 | 129 | 1237 | 762 | 334 | 561 | 787 | 1395 | 391 | 1127 | 33.30 | 1477 | 219 | 1330 | 220 | 1330 | 1330 | 1330 | 1330 |
| W=0.64 K/FT. | | 1739 | 325 | 1264 | 1492 | 500 | 972 | 1156 | 130 | 1248 | 770 | 335 | 569 | 801 | 1416 | 398 | 1144 | 33.60 | 1492 | 220 | 1381 | 228 | 1381 | 1381 | 1381 | 1381 |
| W=0.64 K/FT. | | 1757 | 327 | 1277 | 1507 | 505 | 979 | 1167 | 130 | 1259 | 778 | 335 | 577 | 815 | 1437 | 405 | 1161 | 34.01 | 1510 | 222 | 1343 | 223 | 1343 | 1343 | 1343 | 1343 |
| W=0.64 K/FT. | | 1775 | 330 | 1288 | 1522 | 511 | 986 | 1179 | 130 | 1270 | 786 | 335 | 586 | 830 | 1459 | 411 | 1179 | 34.31 | 1525 | 223 | 1356 | 223 | 1356 | 1356 | 1356 | 1356 |
| W=0.64 K/FT. | | 1793 | 334 | 1300 | 1537 | 516 | 994 | 1190 | 131 | 1280 | 794 | 336 | 594 | 845 | 1480 | 418 | 1196 | 34.73 | 1542 | 225 | 1369 | 225 | 1369 | 1369 | 1369 | 1369 |
| W=0.64 K/FT. | | 1811 | 337 | 1311 | 1552 | 522 | 1001 | 1202 | 131 | 1291 | 802 | 336 | 602 | 859 | 1502 | 425 | 1214 | 35.15 | 1560 | 228 | 1381 | 228 | 1381 | 1381 | 1381 | 1381 |
| W=0.64 K/FT. | | 1829 | 340 | 1323 | 1567 | 527 | 1008 | 1213 | 132 | 1302 | 810 | 336 | 611 | 874 | 1523 | 432 | 1232 | 35.45 | 1575 | 229 | 1394 | 229 | 1394 | 1394 | 1394 | 1394 |
| W=0.64 K/FT. | | 1847 | 343 | 1334 | 1583 | 532 | 1015 | 1225 | 132 | 1313 | 818 | 337 | 619 | 889 | 1545 | 439 | 1250 | 35.87 | 1593 | 231 | 1407 | 231 | 1407 | 1407 | 1407 | 1407 |
| W=0.64 K/FT. | | 1865 | 347 | 1345T | 1598T | 538T | 1022T | 1235T | 133T | 1324T | 826T | 337T | 628L | 904L | 1567L | 446L | 1268L | 36.18 | 1609T | 232T | 1420T | 232 | 1420T | 1420T | 1420T | 1420T |

| LOADING | POSITIVE MOMENTS (KIP·FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP·FEET) | | | | | | | | | | | | | | |
|----------------|-----------------------------|-------------|------------|----------------|----------------|-------------|------------|----------------|----------|-------------|------------|----------------|-----------------------------|-------------|------------|----------------|----------------------|-------------|------------|----------------|----------------------|-------------|------------|--|------------------------------|--|--|
| | TRUCK (T) | | | | ALTERNATIVE(A) | | | | LANE (L) | | | | MAXIMUM POSITIVE MOMENTS | | | | MOMENTS AT 0.3 POINT | | | | MOMENTS AT 0.8 POINT | | | | MAXIMUM NEGATIVE MOMENTS @ A | | |
| W/P.A. #PCF | uL FT | SBM # uL | FEM # A | W/P.A. #PCF | uL FT | SBM # uL | FEM # A | W/P.A. #PCF | uL FT | SBM # uL | FEM # A | W/P.A. #PCF | uL FT | SBM # uL | FEM # A | W/P.A. #PCF | uL FT | SBM # uL | FEM # A | W/P.A. #PCF | uL FT | SBM # uL | FEM # A | | | | |
| 120 | 204 | 57.6 | 1883T | 350T | 1357T | 1613T | 543T | 1029T | 1248T | 133T | 1335T | 834T | 337T | 636L | 919L | 1590L | 453L | 1287L | 1590L | 1672T | 234T | 1432T | 120 | | | | |
| 121 | 203 | 58.1 | 1901 | 353 | 1369 | 1628 | 549 | 1036 | 1260 | 134 | 1366 | 842 | 338 | 645 | 935 | 1612 | 460 | 1305 | 1612 | 1650 | 1672 | 1445 | 121 | | | | |
| 122 | 202 | 58.7 | 1919 | 355 | 1382 | 1643 | 554 | 1043 | 1271 | 134 | 1357 | 850 | 338 | 654 | 950 | 1634 | 467 | 1324 | 1324 | 1660 | 238 | 1458 | 122 | | | | |
| 123 | 202 | 59.2 | 1937 | 358 | 1393 | 1658 | 560 | 1050 | 1283 | 134 | 1367 | 858 | 338 | 663 | 966 | 1657 | 474 | 1342 | 1375 | 1675 | 239 | 1471 | 123 | | | | |
| 124 | 201 | 59.6 | 1955 | 362 | 1405 | 1673 | 565 | 1057 | 1294 | 135 | 1378 | 866 | 339 | 671 | 982 | 1680 | 480 | 1361 | 1397 | 1693 | 241 | 1483 | 124 | | | | |
| 125 | 200 | 60.1 | 1973 | 365 | 1416 | 1688 | 570 | 1064 | 1306 | 135 | 1389 | 874 | 339 | 680 | 998 | 1703 | 489 | 1380 | 1380 | 1711 | 242 | 1496 | 125 | | | | |
| 126 | 199 | 60.6 | 1991 | 368 | 1427 | 1704 | 576 | 1071 | 1317 | 136 | 1400 | 882 | 339 | 689 | 1014 | 1726 | 496 | 1399 | 1399 | 1727 | 245 | 1509 | 126 | | | | |
| 127 | 199 | 61.1 | 2009 | 371 | 1439 | 1719 | 581 | 1078 | 1329 | 136 | 1411 | 889 | 340 | 698 | 1030 | 1749 | 504 | 1418 | 1418 | 1745 | 247 | 1521 | 127 | | | | |
| 128 | 198 | 61.6 | 2027 | 375 | 1450 | 1734 | 587 | 1085 | 1340 | 137 | 1421 | 897 | 340 | 707 | 1046 | 1773 | 511 | 1438 | 1438 | 1755 | 248 | 1534 | 128 | | | | |
| 129 | 197 | 62.0 | 2045 | 378 | 1462 | 1749 | 592 | 1092 | 1352 | 137 | 1432 | 905 | 340 | 716 | 1062 | 1796 | 519 | 1457 | 1457 | 1776 | 249 | 1547 | 129 | | | | |
| 130 | 196 | 62.5 | 2063 | 381 | 1473 | 1764 | 597 | 1099 | 1363 | 138 | 1443 | 913 | 340 | 725 | 1079 | 1820 | 527 | 1477 | 1477 | 1830 | 252 | 1559 | 130 | | | | |
| 131 | 195 | 63.0 | 2081 | 384 | 1485 | 1779 | 603 | 1106 | 1375 | 138 | 1454 | 921 | 341 | 735 | 1095 | 1844 | 534 | 1496 | 1496 | 1859 | 253 | 1572 | 131 | | | | |
| 132 | 195 | 63.5 | 2099 | 388 | 1496 | 1794 | 608 | 1113 | 1386 | 139 | 1464 | 929 | 341 | 744 | 1112 | 1868 | 542 | 1516 | 1516 | 1888 | 255 | 1585 | 132 | | | | |
| 133 | 194 | 64.0 | 2117 | 391 | 1507 | 1809 | 614 | 1120 | 1398 | 139 | 1475 | 937 | 341 | 753 | 1129 | 1892 | 550 | 1536 | 1536 | 1911 | 257 | 1597 | 133 | | | | |
| 134 | 193 | 64.6 | 2135 | 393 | 1521 | 1824 | 619 | 1127 | 1409 | 139 | 1486 | 945 | 341 | 763 | 1146 | 1916 | 558 | 1556 | 1556 | 1961 | 259 | 1610 | 134 | | | | |
| 135 | 192 | 65.1 | 2153 | 396 | 1532 | 1840 | 625 | 1134 | 1421 | 140 | 1496 | 953 | 342 | 772 | 1163 | 1941 | 565 | 1576 | 1576 | 1977 | 260 | 1623 | 135 | | | | |
| 136 | 192 | 65.6 | 2171 | 399 | 1543 | 1855 | 630 | 1141 | 1432 | 140 | 1507 | 961 | 342 | 781 | 1181 | 1965 | 573 | 1597 | 1597 | 1985 | 263 | 1635 | 136 | | | | |
| 137 | 191 | 66.0 | 2189 | 402 | 1555 | 1870 | 635 | 1148 | 1444 | 141 | 1518 | 969 | 342 | 791 | 1198 | 1990 | 581 | 1617 | 1617 | 2008 | 264 | 1648 | 137 | | | | |
| 138 | 190 | 66.5 | 2207 | 406 | 1566 | 1885 | 641 | 1155 | 1455 | 141 | 1528 | 977 | 343 | 801 | 1216 | 2015 | 589 | 1638 | 1638 | 2033 | 266 | 1661 | 138 | | | | |
| 139 | 189 | 67.0 | 2225 | 409 | 1578 | 1900 | 646 | 1162 | 1467 | 142 | 1539 | 985 | 343 | 810 | 1233 | 2040 | 598 | 1658 | 1658 | 2045 | 268 | 1673 | 139 | | | | |
| 140 | 189 | 67.5 | 2243 | 412 | 1589 | 1915 | 652 | 1169 | 1478 | 142 | 1550 | 993 | 343 | 820 | 1251 | 2065 | 606 | 1679 | 1679 | 2060 | 269 | 1686 | 140 | | | | |
| 141 | 188 | 68.0 | 2261 | 415 | 1600 | 1930 | 657 | 1176 | 1490 | 143 | 1560 | 1001 | 343 | 830 | 1269 | 2090 | 614 | 1700 | 1700 | 2074 | 271 | 1699 | 141 | | | | |
| 142 | 187 | 68.4 | 2279 | 418 | 1612 | 1945 | 663 | 1183 | 1501 | 143 | 1571 | 1009 | 343 | 839 | 1287 | 2116 | 622 | 1721 | 1721 | 2094 | 273 | 1711 | 142 | | | | |
| 143 | 187 | 68.9 | 2297 | 422 | 1623 | 1961 | 668 | 1190 | 1513 | 144 | 1581 | 1017 | 344 | 849 | 1305 | 2141 | 621 | 1742 | 1742 | 2113 | 275 | 1724 | 143 | | | | |
| 144 | 186 | 69.4 | 2315 | 425 | 1635 | 1976 | 674 | 1197 | 1524 | 144 | 1592 | 1025 | 344 | 859 | 1323 | 2167 | 639 | 1764 | 1764 | 2029 | 276 | 1737 | 144 | | | | |
| 145 | 185 | 69.9 | 2333 | 428 | 1646 | 1991 | 679 | 1204 | 1536 | 145 | 1603 | 1033 | 344 | 869 | 1342 | 2193 | 647 | 1785 | 1785 | 2044 | 278 | 1749 | 145 | | | | |
| 146 | 185 | 70.4 | 2351 | 431 | 1657 | 2006 | 684 | 1211 | 1548 | 145 | 1613 | 1041 | 344 | 879 | 1360 | 2219 | 656 | 1807 | 1807 | 2048 | 280 | 1762 | 146 | | | | |
| 147 | 184 | 71.0 | 2369 | 433 | 1671 | 2021 | 690 | 1217 | 1559 | 146 | 1624 | 1049 | 345 | 889 | 1379 | 2246 | 664 | 1829 | 1829 | 2059 | 282 | 1774 | 147 | | | | |
| 148 | 183 | 71.5 | 2387 | 436 | 1682 | 2036 | 695 | 1224 | 1571 | 146 | 1634 | 1057 | 345 | 899 | 1398 | 2272 | 673 | 1850 | 1850 | 2077 | 284 | 1787 | 148 | | | | |
| 149 | 182 | 72.0 | 2405T | 440T | 1693T | 2051T | 701T | 1231T | 1582T | 147T | 1645T | 1065T | 345T | 910L | 1417L | 2299L | 682L | 1872L | 1872L | 2085T | 285T | 1800T | 149 | | | | |

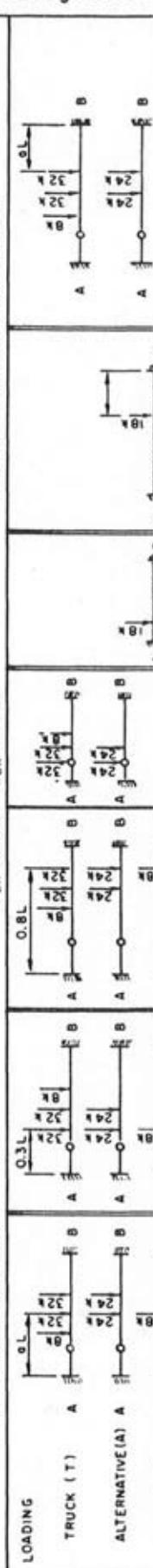
ONE LANE LIVE LOAD (HS20-44)

IMPACT NOT INCLUDED

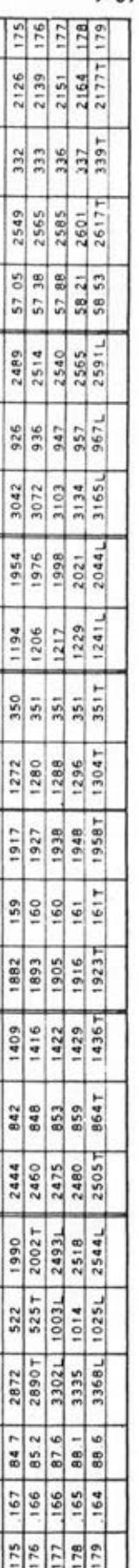
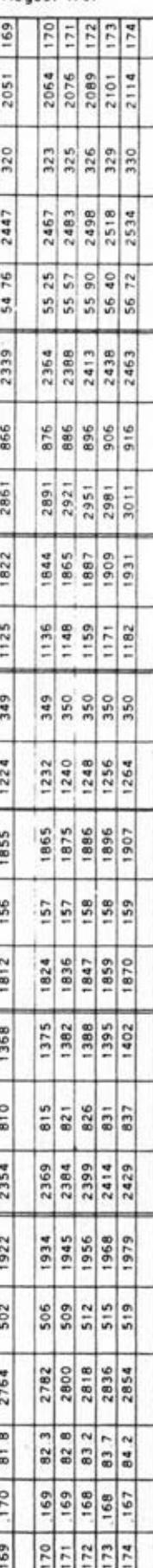
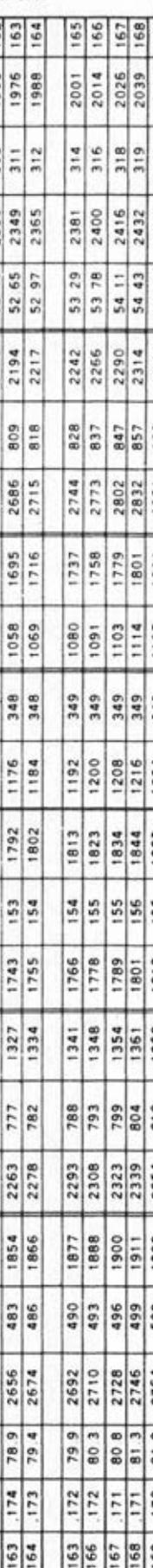
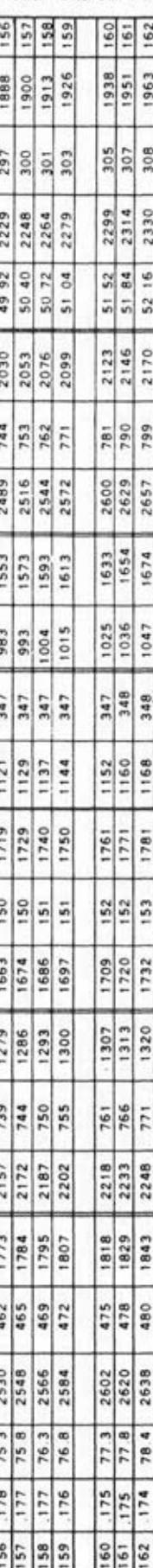
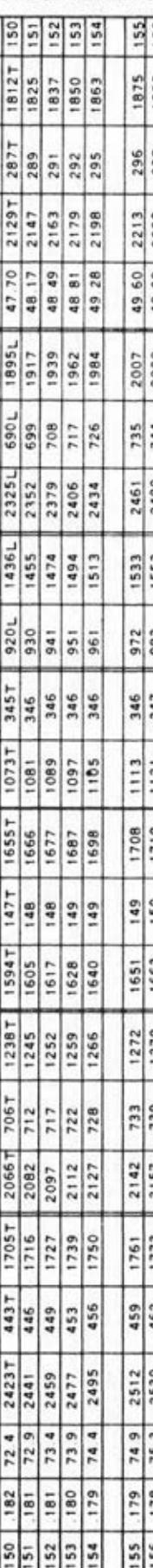
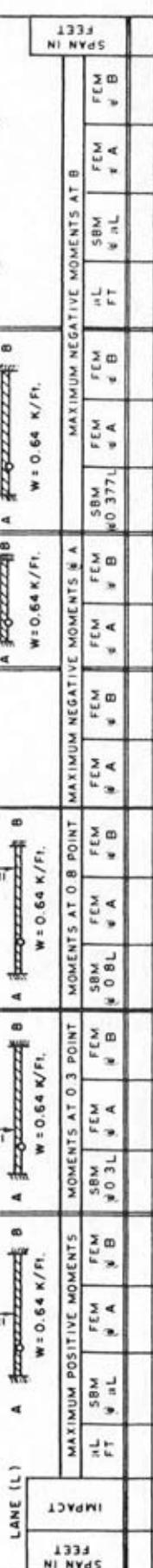
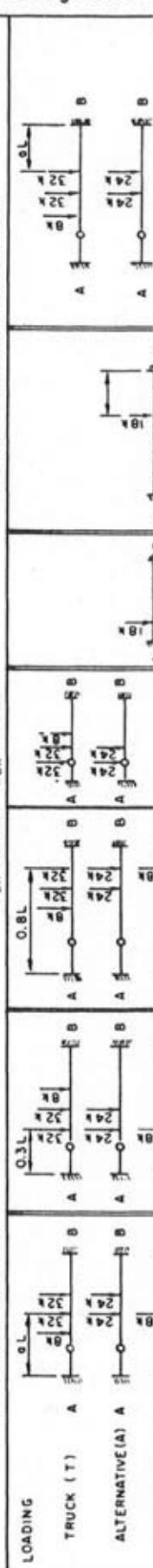
HINGE AT 1/9 POINT (0.111L)

 $K_{AB} = 0.053$ $C_{AB} = 8,000$ $K_{BA} = 3,368$ $C_{BA} = 0.125$

POSITIVE MOMENTS (KIP-FEET)



NEGATIVE MOMENTS (KIP-FEET)



| LOADING | | POSITIVE MOMENTS (KIP-FEET) | | | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | | |
|---------------------|--------------------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-----|
| IMPACT FREQUENCY | SPANNING SPAN IN FEET | TRUCK (T) | A | B | A | B | A | B | A | B | A | B | A | B | A | B | | | | | | | |
| ALTERNATIVE(A) | A | 164 | 89.1 | 3402L | 1035L | 2570L | 2520T | 870T | 1443T | 1939T | 162T | 1969T | 1311T | 351T | 1253L | 2067L | 977L | 2617L | 58.86 | 2632T | 340T | 2189T | 180 |
| ALTERNATIVE(B) | A | 163 | 89.6 | 3435 | 1046 | 2595 | 2535 | 875 | 1449 | 1951 | 162 | 1979 | 1320 | 352 | 1265 | 2090 | 988 | 2643 | 59.37 | 2652 | 343 | 2202 | 181 |
| LANE (L) | A | 163 | 90.1 | 3469 | 1057 | 2621 | 2550 | 880 | 1456 | 1962 | 163 | 1990 | 1328 | 352 | 1277 | 2113 | 998 | 2669 | 59.70 | 2668 | 344 | 2214 | 182 |
| 180 | 162 | 90.6 | 3502 | 1068 | 2647 | 2565 | 886 | 1453 | 1974 | 163 | 2000 | 1336 | 352 | 1289 | 2136 | 1009 | 2696 | 60.02 | 2684 | 346 | 2227 | 183 | |
| 181 | 162 | 91.1 | 3536 | 1079 | 2674 | 2780 | 891 | 1460 | 1985 | 164 | 2010 | 1344 | 352 | 1301 | 2159 | 1019 | 2722 | 60.35 | 2700 | 347 | 2239 | 184 | |
| 182 | 162 | 91.6 | 3570 | 1090 | 2700 | 2796 | 897 | 1477 | 1997 | 164 | 2021 | 1352 | 352 | 1313 | 2183 | 1030 | 2749 | 60.86 | 2719 | 350 | 2252 | 185 | |
| 183 | 162 | 92.1 | 3604 | 1101 | 2726 | 2726 | 902T | 1483T | 2008 | 165 | 2031 | 1360 | 352 | 1326 | 2207 | 1041 | 2775 | 61.19 | 2735 | 352 | 2264 | 186 | |
| 184 | 162 | 92.6 | 3639 | 1112 | 2753 | 2753 | 902L | 1483L | 2020 | 165 | 2041 | 1368 | 353 | 1338 | 2220 | 1052 | 2802 | 61.52 | 2751 | 353 | 2277 | 187 | |
| 185 | 161 | 91.6 | 3570 | 1090 | 2700 | 2796 | 897 | 1477 | 1997 | 164 | 2021 | 1352 | 352 | 1313 | 2183 | 1030 | 2749 | 60.86 | 2719 | 350 | 2252 | 185 | |
| 186 | 161 | 92.1 | 3604 | 1101 | 2726 | 2726 | 902T | 1483T | 2008 | 165 | 2031 | 1360 | 352 | 1326 | 2207 | 1041 | 2775 | 61.19 | 2735 | 352 | 2264 | 186 | |
| 187 | 160 | 92.6 | 3639 | 1112 | 2753 | 2753 | 902L | 1483L | 2020 | 165 | 2041 | 1368 | 353 | 1338 | 2220 | 1052 | 2802 | 61.52 | 2751 | 353 | 2277 | 187 | |
| 188 | 160 | 93.1 | 3673 | 1123 | 2780 | 3086 | 1233 | 2558 | 2031 | 166 | 2052 | 1376 | 353 | 1350 | 2234 | 1062 | 2829 | 61.95 | 2767 | 354 | 2289 | 188 | |
| 189 | 159 | 93.6 | 3708 | 1134 | 2806 | 3115 | 1245 | 2584 | 2043 | 166 | 2062 | 1384 | 353 | 1363 | 2278 | 1073 | 2856 | 62.37 | 2787 | 358 | 2302 | 189 | |
| 190 | 159 | 94.1 | 3743 | 1145 | 2833 | 3144 | 1257 | 2609 | 2054 | 167 | 2072 | 1392 | 353 | 1375 | 2302 | 1084 | 2883 | 62.70 | 2803 | 359 | 2314 | 190 | |
| 191 | 158 | 94.6 | 3778 | 1156 | 2850 | 3174 | 1268 | 2635 | 2066 | 167 | 2082 | 1400 | 353 | 1388 | 2327 | 1095 | 2911 | 63.03 | 2819 | 360 | 2327 | 191 | |
| 192 | 158 | 95.0 | 3813 | 1168 | 2888 | 3203 | 1280 | 2661 | 2077 | 168 | 2093 | 1408 | 353 | 1400 | 2351 | 1082 | 2938 | 63.36 | 2835 | 362 | 2339 | 192 | |
| 193 | 157 | 95.5 | 3848 | 1179 | 2915 | 3225 | 1341 | 2793 | 2135 | 171 | 2144 | 1446 | 354 | 1413 | 2376 | 1061 | 2966 | 63.88 | 2855 | 365 | 2352 | 193 | |
| 194 | 157 | 96.0 | 3883 | 1191 | 2942 | 3262 | 1304 | 2714 | 2100 | 169 | 2113 | 1424 | 354 | 1425 | 2400 | 1069 | 2993 | 64.21 | 2871 | 366 | 2364 | 194 | |
| 195 | 156 | 96.5 | 3919 | 1202 | 2970 | 3292 | 1316 | 2740 | 2112 | 170 | 2124 | 1432 | 354 | 1438 | 2425 | 1082 | 1140 | 3021 | 64.54 | 2887 | 368 | 2377 | 195 |
| 196 | 156 | 97.0 | 3955 | 1214 | 2998 | 3322 | 1329 | 2767 | 2124 | 170 | 2134 | 1440 | 354 | 1451 | 2450 | 1076 | 1151 | 3049 | 64.88 | 2903 | 369 | 2389 | 196 |
| 197 | 155 | 97.5 | 3991 | 1225 | 3025 | 3353 | 1341 | 2793 | 2135 | 171 | 2144 | 1448 | 354 | 1464 | 2475 | 1075 | 1162 | 3077 | 65.40 | 2923 | 372 | 2402 | 197 |
| 198 | 155 | 98.0 | 4027 | 1237 | 3053 | 3383 | 1353 | 2820 | 2147 | 171 | 2155 | 1456 | 354 | 1477 | 2500 | 1084 | 1174 | 3106 | 65.74 | 2939 | 374 | 2414 | 198 |
| 199 | 154 | 98.5 | 4063 | 1249 | 3081 | 3413 | 1365 | 2847 | 2158 | 172 | 2165 | 1464 | 355 | 1489 | 2525 | 1081 | 1185 | 3134 | 66.07 | 2955 | 375 | 2427 | 199 |
| 200 | 154 | 99.0 | 4100 | 1261 | 3110 | 3444 | 1378 | 2874 | 2170 | 172 | 2175 | 1472 | 355 | 1503 | 2551 | 1085 | 1196 | 3162 | 66.40 | 2970 | 377 | 2439 | 200 |
| 201 | 153 | 99.5 | 4136 | 1272 | 3138 | 3475 | 1390 | 2901 | 2181 | 173 | 2185 | 1479 | 355 | 1516 | 2576 | 1086 | 1208 | 3191 | 66.73 | 2986 | 378 | 2452 | 201 |
| 202 | 153 | 100.0 | 4173 | 1284 | 3166 | 3506 | 1403 | 2928 | 2193 | 173 | 2196 | 1487 | 355 | 1529 | 2602 | 1092 | 1220 | 3220 | 67.27 | 3007 | 381 | 2464 | 202 |
| 203 | 152 | 100.5 | 4210 | 1296 | 3195 | 3537 | 1415 | 2956 | 2204 | 174 | 2206 | 1495 | 355 | 1542 | 2628 | 1095 | 1231 | 3249 | 67.60 | 3023 | 383 | 2477 | 203 |
| 204 | 152 | 101.0 | 4247 | 1308 | 3224 | 3568 | 1428 | 2983 | 2216 | 174 | 2216 | 1503 | 355 | 1555 | 2654 | 1090 | 1243 | 3278 | 67.93 | 3039 | 384 | 2489 | 204 |
| 205 | 152 | 101.5 | 4284 | 1320 | 3253 | 3599 | 1441 | 3011 | 2227 | 175 | 2227 | 1511 | 356 | 1569 | 2680 | 1092 | 1255 | 3307 | 68.26 | 3055 | 386 | 2502 | 205 |
| 206 | 151 | 102.0 | 4321 | 1333 | 3282 | 3630 | 1453 | 3039 | 2239 | 175 | 2237 | 1519 | 356 | 1582 | 2706 | 1090 | 1266 | 3336 | 68.60 | 3071 | 387 | 2514 | 206 |
| 207 | 151 | 102.5 | 4359 | 1345 | 3311 | 3662 | 1466 | 3067 | 2250 | 176 | 2247 | 1527 | 356 | 1595 | 2732 | 1095 | 1278 | 3365 | 69.14 | 3091 | 390 | 2527 | 207 |
| 208 | 150 | 103.0 | 4397 | 1357 | 3340 | 3694 | 1479 | 3095 | 2262 | 176 | 2257 | 1535 | 356 | 1609 | 2759 | 1131 | 1290 | 3395 | 69.47 | 3107 | 392 | 2539 | 208 |
| 209 | 150 | 103.5 | 4435L | 1369L | 3369L | 3725L | 1492L | 3123L | 2273T | 177T | 2268T | 1543T | 356T | 1622L | 2785L | 1167L | 1302L | 3424L | 69.81 | 3123T | 393T | 2552T | 209 |

ONE LANE LIVE LOAD (HS20-44)

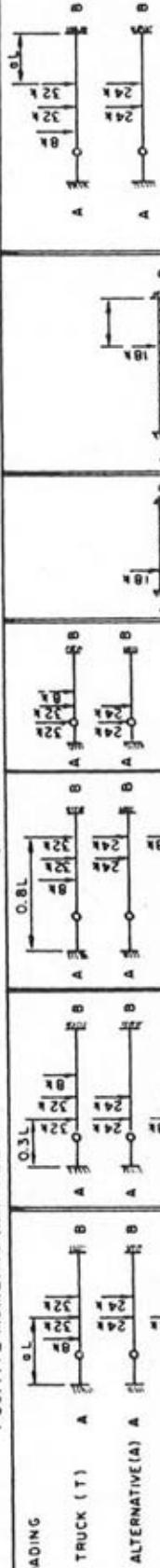
(IMPACT NOT INCLUDED)

HINGE AT 10 POINT (0.100L)

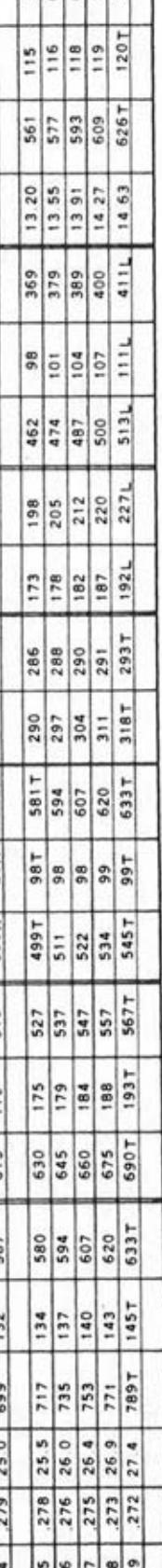
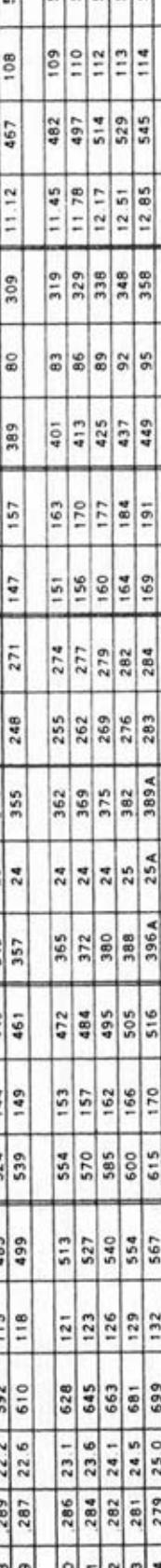
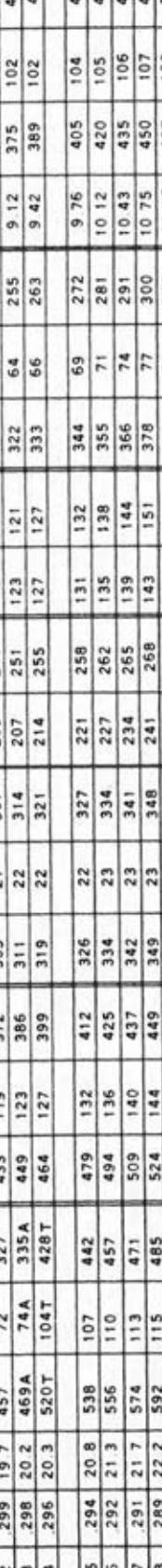
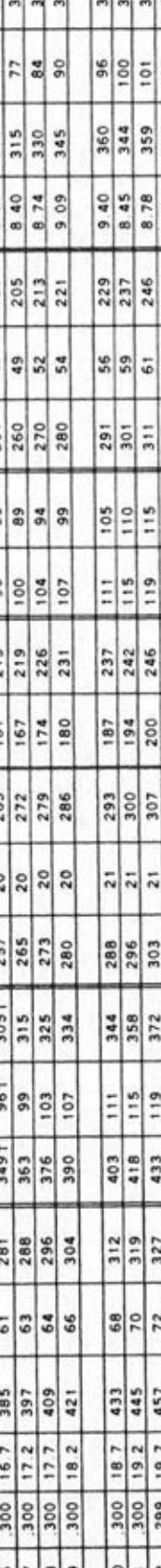
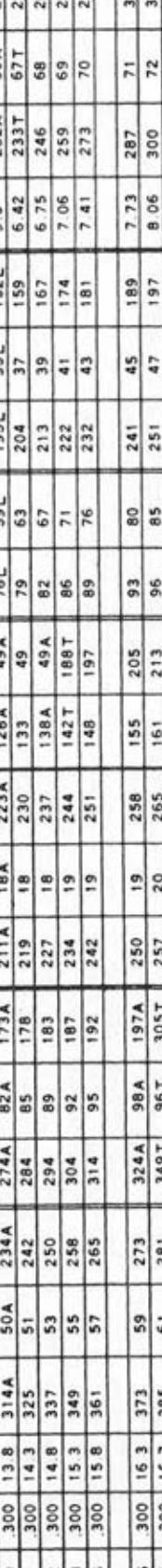
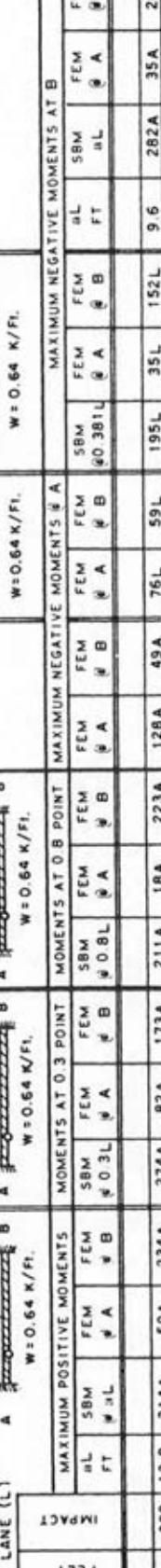
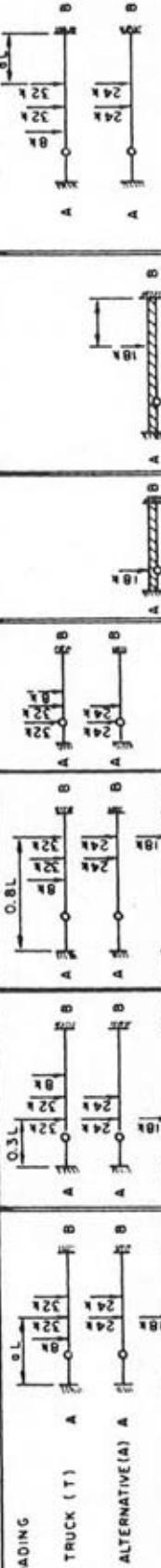
Kan = 0.041 Cab = 9,000

Kba = 3,329 Cba = 0.111

NEGATIVE MOMENTS (KIP-FEET)



POSITIVE MOMENTS (KIP-FEET)

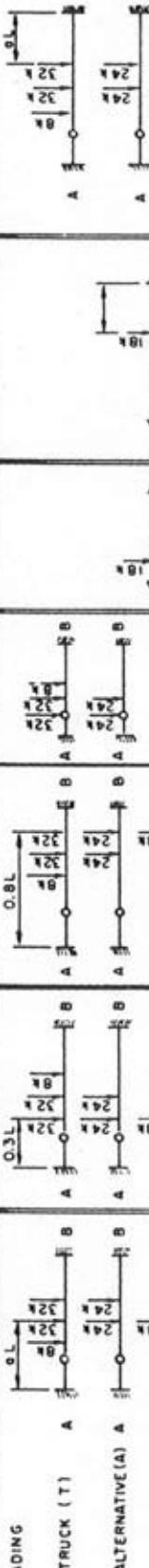


| LOADING | TRUCK (T) | POSITIVE MOMENTS (KIP-FEET) | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | |
|----------------|----------------|-----------------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | | 0.3L | 0.8L | 0.3L | 0.8L | 0.3L | 0.8L | 0.3L | 0.8L | 0.3L | 0.8L | 0.3L | 0.8L |
| IMPACT FEET | IMPACT FEET | MAXIMUM POSITIVE MOMENTS | MAXIMUM POSITIVE MOMENTS | MOMENTS AT 0.3 POINT | MOMENTS AT 0.8 POINT | MOMENTS AT 0.3 POINT | MOMENTS AT 0.8 POINT | MAXIMUM NEGATIVE MOMENTS & A |
| uL | uL | SBM #.uL | FEM #.uL | FEM #.uL | FEM #.uL | SBM #.uL | FEM #.uL | FEM #.uL | FEM #.uL | SBM #.uL | FEM #.uL | FEM #.uL | FEM #.uL |
| 60 | .270 | 27.8 | 806T | 148T | 646T | 706T | 197T | 577T | 557T | 646T | 325T | 197L | 235L |
| 61 | .269 | 28.4 | 824 | 151 | 659 | 721 | 202 | 586 | 568 | 659 | 332 | 296 | 201 |
| 62 | .267 | 28.8 | 842 | 153 | 672 | 736 | 206 | 596 | 580 | 672 | 339 | 298 | 206 |
| 63 | .266 | 29.3 | 860 | 156 | 684 | 751 | 211 | 605 | 591 | 685 | 346 | 299 | 211 |
| 64 | .265 | 29.8 | 878 | 159 | 697 | 766 | 215 | 615 | 603 | 698 | 353 | 301 | 216 |
| 65 | .263 | 30.3 | 896 | 161 | 710 | 781 | 220 | 624 | 614 | 710 | 360 | 302 | 221 |
| 66 | .262 | 30.8 | 914 | 164 | 723 | 796 | 225 | 633 | 626 | 723 | 367 | 303 | 226 |
| 67 | .260 | 31.2 | 932 | 167 | 735 | 811 | 229 | 642 | 637 | 735 | 374 | 304 | 231 |
| 68 | .259 | 31.7 | 950 | 170 | 748 | 827 | 234 | 651 | 649 | 748 | 381 | 306 | 236 |
| 69 | .258 | 32.2 | 968 | 173 | 760 | 842 | 238 | 660 | 660 | 760 | 388 | 307 | 241 |
| 70 | .256 | 32.7 | 986 | 175 | 773 | 857 | 243 | 669 | 672 | 773 | 395 | 308 | 247 |
| 71 | .255 | 33.2 | 1004 | 178 | 785 | 872 | 248 | 678 | 684 | 785 | 402 | 309 | 252 |
| 72 | .254 | 33.6 | 1021 | 181 | 798 | 887 | 252 | 686 | 695 | 797 | 409 | 310 | 257 |
| 73 | .253 | 34.1 | 1039 | 184 | 810 | 902 | 257 | 695 | 707 | 810 | 416 | 311 | 263 |
| 74 | .251 | 34.6 | 1057 | 187 | 822 | 917 | 262 | 703 | 718 | 822 | 424 | 312 | 268 |
| 75 | .250 | 35.0 | 1075 | 190 | 834 | 932 | 266 | 712 | 730 | 102 | 834 | 431 | 312 |
| 76 | .249 | 35.6 | 1093 | 192 | 847 | 948 | 271 | 720 | 741 | 102 | 846 | 438 | 313 |
| 77 | .248 | 36.0 | 1111 | 195 | 859 | 963 | 276 | 729 | 753 | 103 | 858 | 445 | 314 |
| 78 | .246 | 36.5 | 1129 | 198 | 872 | 978 | 280 | 737 | 764 | 103 | 870 | 452 | 315 |
| 79 | .245 | 37.0 | 1147 | 201 | 884 | 993 | 285 | 746 | 776 | 103 | 882 | 459 | 316 |
| 80 | .244 | 37.4 | 1165 | 204 | 896 | 1008 | 290 | 754 | 787 | 103 | 894 | 466 | 316 |
| 81 | .243 | 38.0 | 1183 | 206 | 909 | 1023 | 294 | 762 | 799 | 104 | 905 | 473 | 317 |
| 82 | .241 | 38.5 | 1201 | 209 | 918 | 1038 | 299 | 770 | 810 | 104 | 917 | 480 | 318 |
| 83 | .240 | 38.9 | 1219 | 212 | 923 | 1053 | 304 | 778 | 822 | 104 | 929 | 488 | 319 |
| 84 | .239 | 39.4 | 1237 | 215 | 945 | 1068 | 308 | 787 | 833 | 105 | 941 | 495 | 319 |
| 85 | .238 | 39.9 | 1255 | 217 | 957 | 1084 | 313 | 795 | 845 | 105 | 952 | 502 | 320 |
| 86 | .237 | 40.3 | 1272 | 220 | 969 | 1099 | 318 | 803 | 856 | 105 | 964 | 509 | 320 |
| 87 | .236 | 40.9 | 1290 | 222 | 981 | 1114 | 322 | 811 | 868 | 105 | 976 | 516 | 321 |
| 88 | .235 | 41.4 | 1308 | 225 | 993 | 1129 | 327 | 819 | 879 | 106 | 987 | 523 | 321 |
| 89 | .234 | 41.8 | 1326T | 228T | 1003T | 1144T | 332T | 827T | 891T | 106T | 999T | 530T | 322T |
| | | | | | | | | | | | | | |

ONE LANE LIVE LOAD (HS20-44)

IMPACT NOT INCLUDED!
HINGE AT 1.10 POINT (10'10'L)
KAB = 0.041 C AB = 9.000
Kaa = 3.329 Caa = 0.111

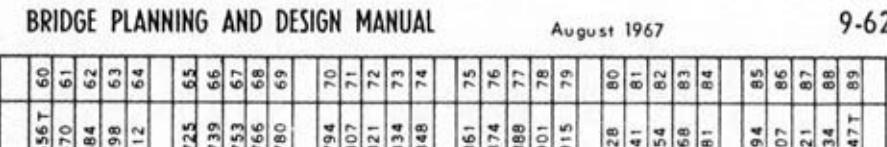
POSITIVE MOMENTS (KIP-FEET)



W = 0.64 K/Ft.

W = 0.64 K/Ft.

W = 0.64 K/Ft.



W = 0.64 K/Ft.

| LOADING | | POSITIVE MOMENTS (KIP.FEET) | | | | | | NEGATIVE MOMENTS (KIP.FEET) | | | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | | | | |
|------------------|--------|-----------------------------|-----------|----------|------------|------------|---------------|-----------------------------|------------|---------------|----------------------|------------|----------------|-------------------------------|------------|-------------|-------------------------------|------------|-------------|------------|------------|-------|-------|------|-------|----|
| TRUCK (T) | | 0.3L | | | 0.8L | | | MOMENTS AT 0.3 POINT | | | MOMENTS AT 0.8 POINT | | | MAXIMUM NEGATIVE MOMENTS AT A | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | |
| IMPACT FFFECT | INCHES | HL FT | SBM ft | UL ft | FEM # A | FEM # B | SBM # 0.3L | FEM # A | FEM # B | SBM # 0.8L | FEM # A | FEM # B | SBM # 0.38L | FEM # A | FEM # B | SBM # HL | FEM # A | FEM # B | SBM # HL | FEM # A | FEM # B | | | | | |
| 90 | 233 | 42.3 | 1344T | 231T | 1017 | 1159T | 337T | 835T | 902T | 106T | 1010T | 537T | 323T | 545 | 368 | 561 | 1011 | 243 | 993L | 238L | 808L | 25.92 | 1135T | 164T | 1060T | 90 |
| 91 | 231 | 42.8 | 1362 | 234 | 1029 | 1174 | 341 | 843 | 914 | 107 | 1022 | 545 | 323 | 552 | 324 | 375 | 553 | 1029 | 248 | 823 | 26.30 | 1152 | 166 | 1073 | 91 | |
| 92 | 230 | 43.2 | 1380 | 237 | 1041 | 1189 | 346 | 850 | 925 | 107 | 1033 | 552 | 324 | 559 | 324 | 381 | 565 | 1048 | 253 | 838 | 26.68 | 1169 | 167 | 1087 | 92 | |
| 93 | 229 | 43.7 | 1398 | 240 | 1053 | 1205 | 351 | 858 | 937 | 107 | 1045 | 559 | 325 | 566 | 325 | 387 | 577 | 1066 | 258 | 853 | 27.06 | 1186 | 169 | 1100 | 93 | |
| 94 | 228 | 44.3 | 1416 | 242 | 1066 | 1220 | 355 | 866 | 948 | 108 | 1056 | 566 | 325 | 577 | 325 | 397 | 587 | 1077 | 263 | 869 | 27.35 | 1201 | 170 | 1113 | 94 | |
| 95 | 227 | 44.7 | 1434 | 245 | 1077 | 1235 | 360 | 874 | 960 | 108 | 1068 | 573 | 325 | 577 | 325 | 394 | 589 | 1084 | 263 | 884 | 27.74 | 1218 | 171 | 1126 | 95 | |
| 96 | 226 | 45.2 | 1452 | 248 | 1089 | 1250 | 365 | 882 | 972 | 108 | 1079 | 580 | 326 | 580 | 326 | 400 | 592 | 1103 | 268 | 900 | 28.13 | 1235 | 173 | 1139 | 96 | |
| 97 | 225 | 45.7 | 1470 | 251 | 1101 | 1265 | 370 | 890 | 983 | 109 | 1090 | 588 | 326 | 588 | 326 | 407 | 614 | 1122 | 273 | 915 | 28.52 | 1252 | 175 | 1152 | 97 | |
| 98 | 224 | 46.2 | 1488 | 254 | 1113 | 1280 | 374 | 897 | 995 | 109 | 1102 | 595 | 326 | 595 | 326 | 414 | 627 | 1141 | 279 | 921 | 28.91 | 1269 | 176 | 1165 | 98 | |
| 99 | 223 | 46.6 | 1506 | 257 | 1125 | 1295 | 379 | 905 | 1006 | 109 | 1113 | 602 | 327 | 602 | 327 | 420 | 640 | 1160 | 284 | 947 | 29.20 | 1284 | 177 | 1178 | 99 | |
| 100 | 222 | 47.1 | 1524 | 260 | 1136 | 1310 | 384 | 913 | 1018 | 110 | 1124 | 609 | 327 | 653 | 327 | 427 | 653 | 1179 | 289 | 963 | 29.60 | 1301 | 179 | 1191 | 100 | |
| 101 | 221 | 47.7 | 1542 | 262 | 1149 | 1326 | 389 | 920 | 1029 | 110 | 1136 | 616 | 328 | 666 | 328 | 434 | 666 | 1199 | 295 | 979 | 30.00 | 1319 | 181 | 1204 | 101 | |
| 102 | 220 | 48.1 | 1560 | 265 | 1161 | 1341 | 393 | 928 | 1041 | 110 | 1147 | 623 | 328 | 674 | 328 | 441 | 679 | 1218 | 300 | 996 | 30.40 | 1336 | 183 | 1217 | 102 | |
| 103 | 219 | 48.6 | 1578 | 267 | 1173 | 1356 | 398 | 936 | 1052 | 111 | 1158 | 630 | 328 | 682 | 328 | 447 | 692 | 1238 | 306 | 1012 | 30.69 | 1351 | 184 | 1230 | 103 | |
| 104 | 218 | 49.1 | 1596 | 270 | 1184 | 1371 | 403 | 943 | 1064 | 111 | 1169 | 638 | 329 | 687 | 329 | 454 | 706 | 1258 | 311 | 1029 | 31.10 | 1369 | 185 | 1243 | 104 | |
| 105 | 217 | 49.6 | 1613 | 273 | 1196 | 1386 | 408 | 951 | 1075 | 112 | 1180 | 645 | 329 | 691 | 329 | 461 | 720 | 1278 | 317 | 1046 | 31.50 | 1386 | 187 | 1256 | 105 | |
| 106 | 216 | 50.0 | 1631 | 276 | 1208 | 1401 | 412 | 959 | 1087 | 112 | 1192 | 652 | 330 | 698 | 330 | 468 | 733 | 1298 | 322 | 1062 | 31.91 | 1403 | 189 | 1269 | 106 | |
| 107 | 216 | 50.5 | 1649 | 279 | 1219 | 1416 | 417 | 966 | 1098 | 112 | 1203 | 659 | 330 | 705 | 330 | 475 | 747 | 1318 | 328 | 1079 | 32.21 | 1419 | 190 | 1282 | 107 | |
| 108 | 215 | 51.0 | 1667 | 282 | 1231 | 1431 | 422 | 974 | 1110 | 113 | 1214 | 666 | 330 | 763 | 330 | 483 | 761 | 1339 | 334 | 1097 | 32.62 | 1436 | 192 | 1295 | 108 | |
| 109 | 214 | 51.4 | 1685 | 285 | 1243 | 1446 | 427 | 981 | 1121 | 113 | 1225 | 673 | 331 | 775 | 331 | 490 | 775 | 1359 | 339 | 1114 | 33.03 | 1454 | 194 | 1308 | 109 | |
| 110 | 213 | 52.0 | 1703 | 287 | 1256 | 1462 | 431 | 989 | 1133 | 113 | 1236 | 681 | 331 | 497 | 790 | 1380 | 345 | 1131 | 33.33 | 1469 | 195 | 1321 | 110 | | | |
| 111 | 212 | 52.5 | 1721 | 290 | 1267 | 1477 | 436 | 996 | 1144 | 114 | 1247 | 688 | 331 | 504 | 804 | 1401 | 351 | 1149 | 33.74 | 1487 | 196 | 1334 | 111 | | | |
| 112 | 211 | 53.0 | 1739 | 293 | 1279 | 1492 | 441 | 1004 | 1156 | 114 | 1258 | 695 | 332 | 512 | 819 | 1422 | 357 | 1166 | 34.16 | 1504 | 198 | 1347 | 112 | | | |
| 113 | 210 | 53.4 | 1757 | 296 | 1291 | 1507 | 446 | 1011 | 1167 | 114 | 1269 | 702 | 332 | 519 | 833 | 1443 | 363 | 1184 | 34.46 | 1520 | 199 | 1360 | 113 | | | |
| 114 | 209 | 53.9 | 1775 | 299 | 1302 | 1522 | 451 | 1019 | 1179 | 115 | 1280 | 709 | 332 | 526 | 848 | 1465 | 369 | 1202 | 34.88 | 1537 | 201 | 1373 | 114 | | | |
| 115 | 208 | 54.4 | 1793 | 302 | 1314 | 1537 | 455 | 1026 | 1190 | 115 | 1291 | 716 | 333 | 534 | 863 | 1486 | 375 | 1220 | 35.19 | 1553 | 202 | 1386 | 115 | | | |
| 116 | 207 | 54.9 | 1811 | 304 | 1326 | 1552 | 460 | 1034 | 1202 | 116 | 1302 | 724 | 333 | 541 | 878 | 1508 | 381 | 1238 | 35.61 | 1571 | 204 | 1399 | 116 | | | |
| 117 | 207 | 55.3 | 1829 | 307 | 1337 | 1567 | 465 | 1041 | 1213 | 116 | 1313 | 731 | 333 | 549 | 893 | 1530 | 389 | 1256 | 35.92 | 1586 | 205 | 1412 | 117 | | | |
| 118 | 206 | 55.8 | 1847 | 310 | 1349 | 1583 | 470 | 1049 | 1225 | 116 | 1324 | 738 | 333 | 556 | 909 | 1552 | 394 | 1275 | 36.34 | 1604 | 207 | 1425 | 118 | | | |
| 119 | 205 | 56.4 | 1865T | 312T | 1362T | 1598T | 474T | 1056T | 1236T | 117T | 1335T | 745T | 334T | 564L | 924L | 1574L | 400L | 1293L | 36.77 | 1622T | 209T | 1437T | 119 | | | |

| ONE LANE LIVE LOAD (HS20-44) | | | | | | | | | |
|------------------------------|-------------------------|--|---------------------|---------------------|------------------------|---------------------|---------------------|--|--|
| IMPACT NOT INCLUDED | | | | | | | | | |
| HINGE AT 1/10 POINT (0 100L) | | | | | | | | | |
| K _{AB} = 0.041 | C _{AB} = 9,000 | | | | | | | | |
| K _{BA} = 3,329 | C _{BA} = 0.111 | | | | | | | | |
| POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | |
| NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | |
| LOADING | | | | | | | | | |
| TRUCK (T) | A | 0.3L | 0.8L | 0.3L | 0.8L | 0.3L | 0.8L | 0.3L | 0.8L |
| ALTERNATIVE (A) | A | W = 0.64 kip/ft. | | | | | | | |
| LANE (L) | A | W = 0.64 kip/ft. | | | | | | | |
| N | IMPACT FEET | MAXIMUM POSITIVE MOMENTS # OF L | FEM # OF A | FEM # OF B | SBM # OF 0.3L | FEM # OF A | FEM # OF B | MAXIMUM NEGATIVE MOMENTS # OF A | MAXIMUM NEGATIVE MOMENTS # OF B |
| 120 | 204 | 56.9 | 1883T | 315T | 1373T | 1613T | 479T | 1063T | 1248T |
| 121 | 203 | 57.4 | 1901 | 318 | 1385 | 1628 | 484 | 1071 | 1260 |
| 122 | 202 | 57.8 | 1919 | 321 | 1397 | 1643 | 489 | 1078 | 1271 |
| 123 | 202 | 58.3 | 1937 | 324 | 1408 | 1658 | 494 | 1086 | 1283 |
| 124 | 201 | 58.8 | 1955 | 327 | 1420 | 1673 | 498 | 1093 | 1294 |
| 125 | 200 | 59.2 | 1973 | 330 | 1431 | 1688 | 503 | 1100 | 1306 |
| 126 | 199 | 59.7 | 1991 | 333 | 1443 | 1704 | 508 | 1108 | 1317 |
| 127 | 198 | 60.2 | 2009 | 335 | 1454 | 1719 | 513 | 1115 | 1329 |
| 128 | 198 | 60.7 | 2027 | 338 | 1466 | 1734 | 517 | 1122 | 1340 |
| 129 | 197 | 61.1 | 2044 | 341 | 1478 | 1749 | 522 | 1130 | 1352 |
| 130 | 196 | 61.7 | 2063 | 343 | 1491 | 1764 | 527 | 1137 | 1363 |
| 131 | 195 | 62.2 | 2081 | 346 | 1502 | 1779 | 532 | 1144 | 1375 |
| 132 | 195 | 62.7 | 2098 | 349 | 1514 | 1794 | 537 | 1152 | 1386 |
| 133 | 194 | 63.2 | 2116 | 352 | 1525 | 1809 | 541 | 1159 | 1398 |
| 134 | 193 | 63.6 | 2134 | 355 | 1537 | 1824 | 546 | 1166 | 1409 |
| 135 | 192 | 64.1 | 2152 | 358 | 1548 | 1840 | 551 | 1174 | 1421 |
| 136 | 192 | 64.6 | 2170 | 361 | 1560 | 1855 | 556 | 1181 | 1432 |
| 137 | 191 | 65.1 | 2188 | 363 | 1571 | 1870 | 561 | 1188 | 1444 |
| 138 | 190 | 65.5 | 2206 | 366 | 1583 | 1885 | 565 | 1196 | 1455 |
| 139 | 189 | 66.0 | 2224 | 369 | 1595 | 1900 | 570 | 1203 | 1467 |
| 140 | 189 | 66.5 | 2242 | 372 | 1606 | 1915 | 575 | 1210 | 1478 |
| 141 | 189 | 67.0 | 2260 | 375 | 1618 | 1930 | 580 | 1217 | 1490 |
| 142 | 187 | 67.6 | 2278 | 377 | 1631 | 1945 | 584 | 1225 | 1501 |
| 143 | 187 | 68.1 | 2296 | 380 | 1642 | 1961 | 589 | 1232 | 1513 |
| 144 | 186 | 68.5 | 2314 | 383 | 1654 | 1976 | 594 | 1239 | 1524 |
| 145 | 185 | 69.0 | 2332 | 385 | 1665 | 1991 | 599 | 1246 | 1536 |
| 146 | 185 | 69.5 | 2350 | 388 | 1677 | 2006 | 604 | 1254 | 1548 |
| 147 | 184 | 70.0 | 2368 | 391 | 1688 | 2021 | 608 | 1261 | 1559 |
| 148 | 183 | 70.4 | 2386 | 394 | 1700 | 2036 | 613 | 1268 | 1571 |
| 149 | 182 | 70.9 | 2404 | 397T | 1711T | 2051T | 618T | 1275T | 1582T |

ONE LANE LIVE LOAD (HS-20-44)

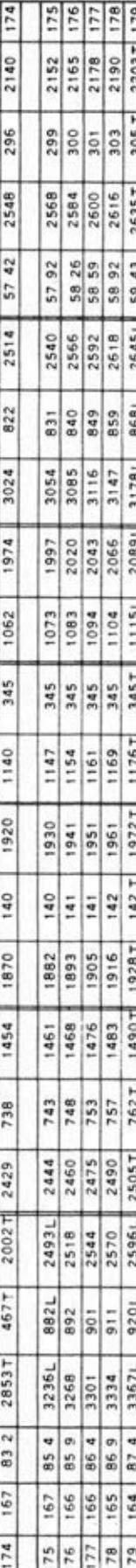
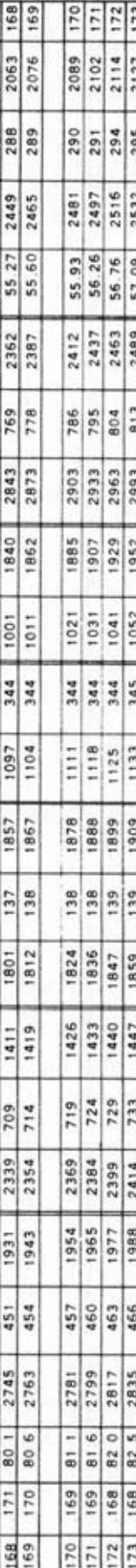
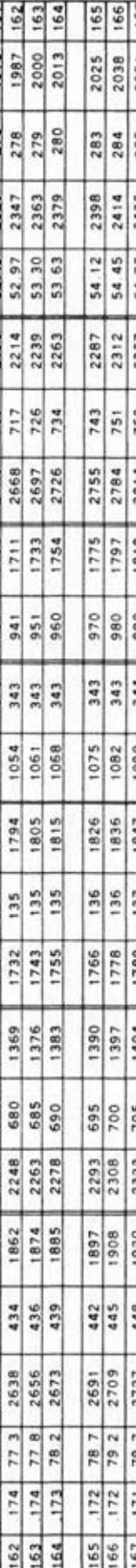
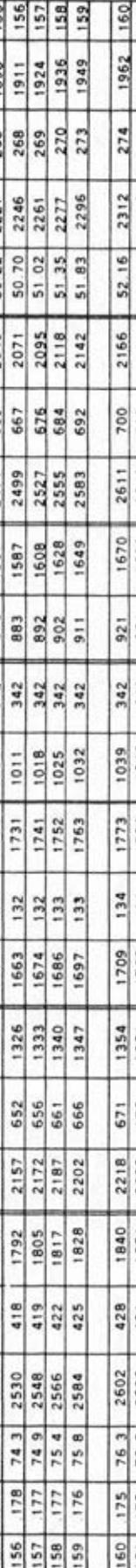
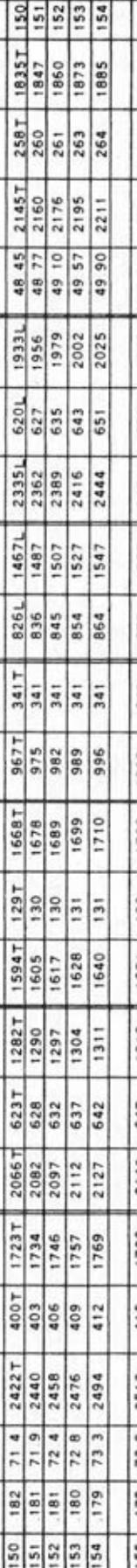
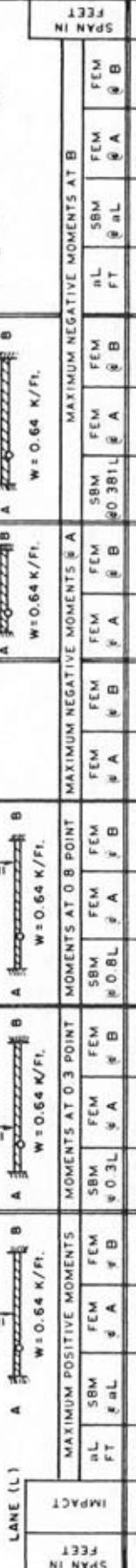
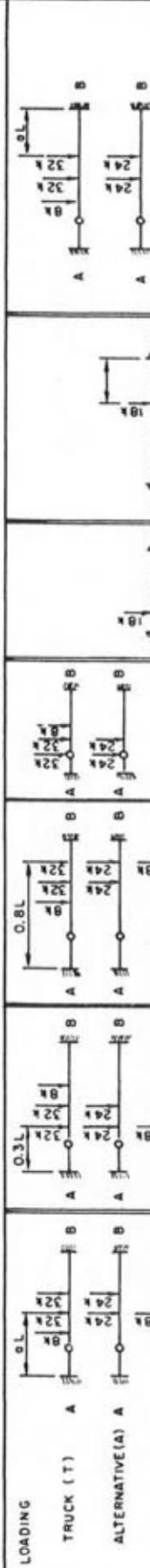
(IMPACT NOT INCLUDED)

HINGE AT 1/10 POINT (0.100 L)

KAB = 0.041 CAB = 9,000

KBA = 3.329 CBA = 0.111

NEGATIVE MOMENTS (KIP-FEET)



August 1967

ONE LANE LIVE LOAD (HS20-44)
(IMPACT NOT INCLUDED)
 HINGE AT 1/10 POINT (0' 100'L)
 $K_{AB} = 0.041$ $C_{AB} = 9,000$
 $K_{BA} = 3.329$ $C_{BA} = 0.111$
POSITIVE MOMENTS (KIP-FEET)

| LOADING | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | SPAN IN | | | | | | | | | | |
|------------|-----------------------------|-----------------|----------|----------------------|----------------|----------------|----------------------|----------------|---------------|------------------------------|------------|------------|------------|-------------------------------|------------|------------|------------|------------|------------|-------|------|-------|-----|
| | MAXIMUM POSITIVE MOMENTS | | | MOMENTS AT 0.3 POINT | | | MOMENTS AT 0.8 POINT | | | MAXIMUM NEGATIVE MOMENTS @ A | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | | |
| IMPAK T | TRUCK (T) | ALTERNATIVE (A) | LANE (L) | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | FEM @ 0.3L | FEM @ 0.8L | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | FEM @ A | FEM @ B | | | | |
| 180 | 164 | 87.8 | 3400L | 930L | 2622L | 2520L | 767T | 1497T | 1939T | 142T | 1982T | 1183T | 346T | 1126L | 2113L | 3209L | 877L | 2671L | 59.76 | 2651T | 307T | 2216T | 180 |
| 181 | 163 | 88.3 | 3433 | 939 | 2649 | 2535 | 772 | 1504 | 1951 | 143 | 1993 | 1190 | 346 | 1136 | 2136 | 3241 | 887 | 2698 | 60.09 | 2667 | 308 | 2228 | 181 |
| 182 | 163 | 88.8 | 3467 | 949 | 2675 | 2550 | 777 | 1511 | 1962 | 143 | 2003 | 1197 | 346 | 1147 | 2160 | 3272 | 896 | 2725 | 60.42 | 2683 | 309 | 2241 | 182 |
| 183 | 162 | 89.3 | 3501 | 959 | 2702 | 2565T | 781T | 1518T | 1974 | 144 | 2013 | 1204 | 346 | 1158 | 2184 | 3304 | 905 | 2751 | 60.94 | 2703 | 312 | 2254 | 183 |
| 184 | 162 | 89.8 | 3534 | 969 | 2729 | 2971L | 1061L | 2521L | 1985 | 144 | 2024 | 1212 | 346 | 1169 | 2207 | 3336 | 915 | 2778 | 61.27 | 2719 | 313 | 2266 | 184 |
| 185 | 161 | 90.3 | 3568 | 978 | 2755 | 2999 | 1071 | 2547 | 1997 | 145 | 2034 | 1219 | 346 | 1180 | 2232 | 3368 | 924 | 2806 | 61.60 | 2735 | 314 | 2279 | 185 |
| 186 | 161 | 90.8 | 3603 | 988 | 2782 | 3028 | 1082 | 2573 | 2008 | 145 | 2045 | 1226 | 346 | 1191 | 2256 | 3400 | 934 | 2833 | 61.94 | 2751 | 316 | 2292 | 186 |
| 187 | 160 | 91.3 | 3637 | 998 | 2810 | 3057 | 1092 | 2599 | 2020 | 146 | 2055 | 1233 | 347 | 1202 | 2280 | 3433 | 944 | 2860 | 62.46 | 2771 | 318 | 2304 | 187 |
| 188 | 160 | 91.7 | 3671 | 1008 | 2837 | 3086 | 1103 | 2625 | 2031 | 146 | 2065 | 1240 | 347 | 1213 | 2304 | 3465 | 953 | 2888 | 62.79 | 2787 | 320 | 2317 | 188 |
| 189 | 159 | 92.2 | 3705 | 1018 | 2864 | 3115 | 1113 | 2652 | 2043 | 146 | 2076 | 1246 | 347 | 1224 | 2329 | 3498 | 963 | 2916 | 63.13 | 2803 | 321 | 2330 | 189 |
| 190 | 159 | 92.7 | 3741 | 1028 | 2892 | 3144 | 1124 | 2678 | 2054 | 147 | 2086 | 1255 | 347 | 1235 | 2354 | 3531 | 973 | 2943 | 63.46 | 2819 | 322 | 2342 | 190 |
| 191 | 158 | 93.2 | 3776 | 1039 | 3174 | 1134 | 2704 | 2066 | 147 | 2096 | 1262 | 347 | 1246 | 2379 | 3554 | 983 | 2971 | 63.98 | 2838 | 325 | 2355 | 191 | |
| 192 | 158 | 93.7 | 3811 | 1049 | 3203 | 1145 | 2731 | 2077 | 148 | 2107 | 1269 | 347 | 1258 | 2403 | 3597 | 993 | 2999 | 64.32 | 2855 | 326 | 2368 | 192 | |
| 193 | 157 | 94.2 | 3846 | 1059 | 2975 | 3233 | 1156 | 2758 | 2089 | 148 | 2117 | 1276 | 347 | 1269 | 2429 | 3610 | 1003 | 3027 | 64.65 | 2871 | 327 | 2380 | 193 |
| 194 | 157 | 94.5 | 3882 | 1069 | 3003 | 3262 | 1167 | 2785 | 2100 | 149 | 2127 | 1284 | 348 | 1280 | 2454 | 3654 | 1013 | 3056 | 64.99 | 2887 | 329 | 2393 | 194 |
| 195 | 156 | 95.2 | 3917 | 1080 | 3031 | 3292 | 1177 | 2812 | 2112 | 149 | 2138 | 1291 | 348 | 1292 | 2479 | 3637 | 1023 | 3084 | 65.32 | 2903 | 330 | 2405 | 195 |
| 196 | 156 | 95.6 | 3953 | 1090 | 3060 | 3322 | 1188 | 2839 | 2124 | 150 | 2148 | 1298 | 348 | 1303 | 2505 | 3731 | 1033 | 3113 | 65.86 | 2923 | 333 | 2418 | 196 |
| 197 | 155 | 96.1 | 3989 | 1100 | 3088 | 3353 | 1199 | 2866 | 2135 | 150 | 2159 | 1305 | 348 | 1315 | 2530 | 3765 | 1043 | 3142 | 66.19 | 2939 | 334 | 2431 | 197 |
| 198 | 155 | 96.6 | 4025 | 1111 | 3117 | 3383 | 1210 | 2894 | 2147 | 150 | 2169 | 1312 | 348 | 1326 | 2556 | 3799 | 1053 | 3170 | 66.53 | 2955 | 335 | 2443 | 198 |
| 199 | 154 | 97.1 | 4061 | 1122 | 3145 | 3413 | 1221 | 2921 | 2158 | 151 | 2179 | 1319 | 348 | 1338 | 2582 | 3833 | 1063 | 3199 | 66.86 | 2971 | 337 | 2456 | 199 |
| 200 | 154 | 97.6 | 4098 | 1132 | 3174 | 3444 | 1232 | 2949 | 2170 | 151 | 2190 | 1327 | 348 | 1350 | 2608 | 3868 | 1074 | 3228 | 67.40 | 2991 | 340 | 2469 | 200 |
| 201 | 153 | 98.1 | 4134 | 1143 | 3203 | 3475 | 1243 | 2977 | 2181 | 152 | 2200 | 1334 | 348 | 1361 | 2634 | 3902 | 1084 | 3258 | 67.74 | 3007 | 341 | 2481 | 201 |
| 202 | 153 | 98.6 | 4171 | 1153 | 3232 | 3506 | 1255 | 3005 | 2193 | 152 | 2210 | 1341 | 349 | 1373 | 2660 | 3937 | 1094 | 3287 | 68.07 | 3023 | 342 | 2494 | 202 |
| 203 | 152 | 99.1 | 4208 | 1164 | 3261 | 3537 | 1266 | 3033 | 2204 | 153 | 2220 | 1348 | 349 | 1385 | 2687 | 3912 | 1105 | 3316 | 68.41 | 3039 | 343 | 2507 | 203 |
| 204 | 152 | 99.6 | 4245 | 1175 | 3291 | 3568 | 1277 | 3061 | 2216 | 153 | 2231 | 1355 | 349 | 1397 | 2713 | 4007 | 1115 | 3346 | 68.75 | 3055 | 345 | 2519 | 204 |
| 205 | 152 | 100.0 | 4282 | 1186 | 3320 | 3599 | 1289 | 3089 | 2227 | 154 | 2241 | 1363 | 349 | 1409 | 2740 | 4052 | 1126 | 3376 | 69.29 | 3076 | 348 | 2532 | 205 |
| 206 | 151 | 100.5 | 4319 | 1197 | 3350 | 3630 | 1300 | 3118 | 2239 | 154 | 2251 | 1370 | 349 | 1421 | 2766 | 4077 | 1137 | 3406 | 69.63 | 3092 | 349 | 2544 | 206 |
| 207 | 151 | 101.0 | 4357 | 1206 | 3380 | 3662 | 1311 | 3147 | 2250 | 155 | 2262 | 1377 | 349 | 1433 | 2793 | 4112 | 1147 | 3436 | 69.97 | 3108 | 350 | 2557 | 207 |
| 208 | 150 | 101.5 | 4395 | 1219 | 3409 | 3694 | 1323 | 3175 | 2262 | 155 | 2272 | 1384 | 349 | 1445 | 2820 | 4148 | 1158 | 3466 | 70.30 | 3124 | 352 | 2570 | 208 |
| 209 | 150 | 102.0 | 4432L | 1230L | 3439L | 3725L | 1334L | 3204L | 2273T | 155T | 2282T | 1391T | 349T | 1457L | 2848L | 4184L | 1169L | 3496L | 70.64 | 3140T | 353T | 2582T | 209 |

| LOADING | POSITIVE MOMENTS (KIP- FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP- FEET) | | | | | | | | | | | |
|---------------------|------------------------------|----------|---------|---------|--------------------------|---------|---------|------------|-------------------------|---------|---------|---------|------------------------------|--------------|---------|---------|--------------|---------|---------|---------|--------------|---------|----|--|
| | HINGE AT 1/11 POINT (0.091L) | | | | KAB = 0.033 CAB = 10,000 | | | | KBA = 3,297 CBA = 0.100 | | | | W=0.64 K/FT. | | | | W=0.64 K/FT. | | | | W=0.64 K/FT. | | | |
| IMPACT SPAN IN FEET | aL FT | SBM @ aL | FEM @ A | FEM @ B | SBM @ 0.3L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | SBM @ A | FEM @ A | FEM @ B | SBM @ 0.385L | FEM @ A | FEM @ B | SBM @ L | FEM @ A | FEM @ B | SBM @ L | FEM @ A | FEM @ B | | |
| 30 | 300 | 13.7 | 313A | 45A | 236A | 274A | 73A | 178A | 211A | 16A | 224A | 116A | 48A | 69L | 60L | 196L | 32L | 154L | 9.7 | 283A | 31A | 246A | 30 | |
| 31 | 300 | 14.2 | 325 | 47 | 244 | 284 | 76 | 183 | 219 | 16 | 231 | 121 | 48 | 72 | 64 | 205 | 33 | 161 | 6.51 | 235T | 61.1 | 256 | 31 | |
| 32 | 300 | 14.6 | 337 | 49 | 252 | 294 | 79 | 188 | 227 | 16 | 238 | 125A | 48A | 75 | 68 | 214 | 35 | 169 | 6.85 | 249 | 62 | 270 | 32 | |
| 33 | 300 | 15.1 | 349 | 50 | 260 | 304 | 82 | 193 | 234 | 17 | 246 | 130T | 191T | 78 | 72 | 223 | 37 | 176 | 7.16 | 262 | 62 | 283 | 33 | |
| 34 | 300 | 15.6 | 361 | 52 | 268 | 314 | 85 | 198 | 242 | 17 | 253 | 135 | 199 | 81 | 77 | 232 | 39 | 184 | 7.51 | 276 | 63 | 297 | 34 | |
| 35 | 300 | 16.1 | 373 | 54 | 275 | 324A | 88A | 203A | 250 | 17 | 260 | 141 | 207 | 84 | 81 | 242 | 41 | 192 | 7.84 | 289 | 64 | 310 | 35 | |
| 36 | 300 | 16.6 | 385 | 55 | 283 | 349T | 85T | 310T | 257 | 17 | 267 | 147 | 215 | 87 | 86 | 252 | 43 | 199 | 8.21 | 303 | 65 | 324 | 36 | |
| 37 | 300 | 17.1 | 397 | 57 | 291 | 363 | 89 | 321 | 265 | 18 | 274 | 153 | 221 | 91 | 91 | 261 | 45 | 207 | 8.55 | 318 | 69 | 337 | 37 | |
| 38 | 300 | 17.5 | 409 | 59 | 299 | 376 | 92 | 331 | 273 | 18 | 281 | 159 | 227 | 94 | 95 | 271 | 47 | 216 | 8.85 | 332 | 76 | 350 | 38 | |
| 39 | 300 | 18.0 | 421 | 60 | 307 | 390 | 96 | 341 | 280 | 18 | 288 | 165 | 233 | 97 | 101 | 281 | 49 | 224 | 9.20 | 348 | 82 | 363 | 39 | |
| 40 | 300 | 18.5 | 433 | 62 | 314 | 403 | 99 | 350 | 288 | 19 | 295 | 171 | 238 | 101 | 106 | 292 | 51 | 232 | 9.24 | 333 | 89 | 374 | 40 | |
| 41 | 300 | 19.0 | 445 | 64 | 322 | 418 | 103 | 365 | 296 | 19 | 302 | 177 | 243 | 104 | 112 | 302 | 53 | 241 | 8.57 | 348 | 90 | 389 | 41 | |
| 42 | 299 | 19.4 | 457 | 66 | 330 | 433 | 107 | 379 | 303 | 19 | 308 | 183 | 247 | 108 | 117 | 313 | 55 | 249 | 8.90 | 363 | 91 | 404 | 42 | |
| 43 | 298 | 19.9 | 469A | 67A | 338A | 449 | 110 | 393 | 311 | 19 | 315 | 189 | 252 | 111 | 123 | 323 | 58 | 258 | 9.24 | 378 | 92 | 419 | 43 | |
| 44 | 296 | 20.1 | 521T | 95T | 434T | 464 | 114 | 407 | 319 | 20 | 322 | 195 | 256 | 115 | 129 | 334 | 60 | 267 | 9.55 | 392 | 93 | 434 | 44 | |
| 45 | 294 | 20.5 | 539 | 98 | 449 | 479 | 118 | 420 | 326 | 20 | 329 | 201 | 259 | 119 | 135 | 345 | 62 | 276 | 9.90 | 408 | 94 | 449 | 45 | |
| 46 | 292 | 21.0 | 556 | 100 | 463 | 494 | 121 | 433 | 334 | 20 | 336 | 208 | 263 | 122 | 141 | 356 | 65 | 285 | 10.26 | 824 | 95 | 454 | 46 | |
| 47 | 291 | 21.4 | 574 | 103 | 477 | 509 | 125 | 446 | 342 | 20 | 343 | 214 | 266 | 126 | 147 | 368 | 67 | 295 | 10.57 | 839 | 95 | 479 | 47 | |
| 48 | 289 | 21.9 | 592 | 105 | 492 | 524 | 129 | 458 | 349 | 21 | 350 | 220 | 269 | 130 | 153 | 379 | 70 | 304 | 10.94 | 455 | 97 | 493 | 48 | |
| 49 | 287 | 22.4 | 610 | 107 | 506 | 539 | 133 | 470 | 357 | 21 | 357 | 226 | 272 | 134 | 160 | 391 | 72 | 314 | 11.27 | 470 | 98 | 508 | 49 | |
| 50 | 286 | 22.8 | 628 | 110 | 519 | 554 | 137 | 482 | 365 | 21 | 364 | 233 | 275 | 137 | 166 | 403 | 75 | 323 | 11.60 | 486 | 98 | 522 | 50 | |
| 51 | 284 | 23.3 | 646 | 112 | 533 | 570 | 141 | 493 | 372 | 22 | 370 | 239 | 277 | 141 | 173 | 414 | 78 | 333 | 11.98 | 502 | 100 | 537 | 51 | |
| 52 | 282 | 23.8 | 664 | 115 | 547 | 585 | 144 | 504 | 380 | 22 | 377 | 245 | 280 | 145 | 180 | 426 | 80 | 343 | 12.32 | 518 | 101 | 551 | 52 | |
| 53 | 281 | 24.2 | 681 | 118 | 560 | 600 | 148 | 515 | 388A | 22A | 384A | 252 | 282 | 149 | 187 | 439 | 83 | 353 | 12.67 | 533 | 102 | 565 | 53 | |
| 54 | 279 | 24.7 | 699 | 120 | 574 | 615 | 152 | 526 | 488T | 88T | 574T | 258 | 284 | 153 | 194 | 451 | 86 | 364 | 13.01 | 549 | 103 | 580 | 54 | |
| 55 | 278 | 25.2 | 717 | 122 | 587 | 630 | 156 | 537 | 499 | 88 | 587 | 264 | 286 | 157 | 201 | 464 | 89 | 374 | 13.36 | 565 | 104 | 594 | 55 | |
| 56 | 276 | 25.6 | 735 | 125 | 600 | 645 | 160 | 548 | 511 | 88 | 600 | 271 | 288 | 161 | 208 | 476 | 92 | 385 | 13.72 | 581 | 105 | 608 | 56 | |
| 57 | 275 | 26.1 | 753 | 127 | 614 | 660 | 164 | 558 | 522 | 86 | 614 | 277 | 290 | 166 | 216 | 489 | 94 | 395 | 14.08 | 597 | 106 | 622 | 57 | |
| 58 | 273 | 26.6 | 771 | 130 | 627 | 675 | 168 | 568 | 534 | 88 | 627 | 283 | 291 | 170 | 224 | 502 | 97 | 406 | 14.44 | 614 | 108 | 636 | 58 | |
| 59 | 272 | 27.1 | 789T | 132T | 640T | 690T | 172T | 597 | 545T | 88T | 640T | 290T | 293T | 174L | 231L | 515L | 100L | 417L | 14.61 | 630T | 109T | 650T | 59 | |

August 1967

| LOADING | POSITIVE MOMENTS (KIP-FEET) | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | MAXIMUM NEGATIVE MOMENTS AT B | | | | | | | | |
|---|-----------------------------|--------|----------------|--------|----------------|--------|-----------------------------|--------|----------------|--------|----------------|--------|-------------------------------|--------|----------------|--------|----------------|--------|----------------|--------|--------|
| | IMPACT FACTOR | BL FT | SBM #A | FEM #A | BL FT | SBM #B | FEM #B | BL FT | SBM #A | FEM #A | BL FT | SBM #B | FEM #B | BL FT | SBM #A | FEM #A | BL FT | SBM #B | FEM #B | | |
| ONE LANE LIVE LOAD (HS20-44) <small>(IMPACT NOT INCLUDED)</small> | | | | | | | | | | | | | | | | | | | | | |
| TRUCK (T) | | | | | | | | | | | | | | | | | | | | | |
| ALTERNATIVE (A) | A | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | | |
| LANE (L) | A | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | 0.3L | W = 0.64 K/Ft. | | |
| IMPACT FACTOR | BL FT | SBM #A | FEM #A | BL FT | SBM #B | FEM #B | BL FT | SBM #A | FEM #A | BL FT | SBM #B | FEM #B | BL FT | SBM #A | FEM #A | BL FT | SBM #B | FEM #B | | | |
| 60 | 270 | 27.5 | 807T | 135T | 653T | 706T | 176T | 589T | 557T | 88T | 653T | 296T | 178L | 295T | 103L | 528L | 1518 | 646T | 110T | | |
| 61 | 269 | 28.0 | 824 | 137 | 666 | 721 | 180 | 598 | 568 | 88 | 666 | 302 | 183 | 247 | 542 | 107 | 439 | 1555 | 663 | 111 | |
| 62 | 267 | 28.5 | 842 | 140 | 679 | 736 | 184 | 608 | 580 | 89 | 679 | 309 | 298 | 187 | 555 | 110 | 450 | 1587 | 678 | 112 | |
| 63 | 266 | 29.0 | 860 | 142 | 692 | 751 | 189 | 618 | 591 | 89 | 692 | 315 | 299 | 192 | 569 | 113 | 462 | 1625 | 695 | 114 | |
| 64 | 265 | 29.4 | 878 | 145 | 705 | 766 | 193 | 628 | 603 | 89 | 705 | 322 | 300 | 196 | 583 | 116 | 473 | 1664 | 712 | 115 | |
| 65 | 263 | 29.9 | 896 | 147 | 717 | 781 | 197 | 637 | 614 | 89 | 717 | 328 | 302 | 201 | 597 | 119 | 485 | 1696 | 727 | 116 | |
| 66 | 262 | 30.4 | 914 | 150 | 730 | 796 | 201 | 647 | 626 | 89 | 730 | 334 | 303 | 205 | 611 | 123 | 497 | 1736 | 744 | 117 | |
| 67 | 260 | 30.8 | 932 | 153 | 743 | 811 | 205 | 656 | 637 | 89 | 742 | 341 | 304 | 210 | 626 | 126 | 509 | 1769 | 760 | 118 | |
| 68 | 259 | 31.3 | 950 | 155 | 756 | 827 | 209 | 665 | 649 | 90 | 755 | 347 | 305 | 214 | 640 | 130 | 521 | 1809 | 777 | 120 | |
| 69 | 258 | 31.8 | 968 | 157 | 768 | 842 | 213 | 674 | 660 | 90 | 767 | 354 | 306 | 219 | 655 | 133 | 533 | 1842 | 793 | 121 | |
| 70 | 256 | 32.3 | 985 | 160 | 781 | 857 | 217 | 683 | 672 | 90 | 780 | 360 | 307 | 224 | 670 | 136 | 545 | 1883 | 810 | 122 | |
| 71 | 255 | 32.7 | 1003 | 163 | 793 | 872 | 221 | 692 | 684 | 90 | 792 | 367 | 308 | 229 | 685 | 140 | 558 | 1917 | 826 | 124 | |
| 72 | 254 | 33.2 | 1021 | 165 | 806 | 887 | 226 | 701 | 695 | 90 | 804 | 373 | 309 | 234 | 645 | 700 | 144 | 571 | 1951 | 842 | 125 |
| 73 | 253 | 33.7 | 1039 | 167 | 819 | 902 | 230 | 710 | 707 | 91 | 817 | 380 | 310 | 238 | 715 | 715 | 147 | 584 | 1993 | 860 | 126 |
| 74 | 251 | 34.2 | 1057 | 170 | 831 | 917 | 234 | 719 | 718 | 91 | 829 | 386 | 311 | 243 | 730 | 151 | 597 | 2028 | 876 | 127 | |
| 75 | 250 | 34.6 | 1075 | 173 | 843 | 932 | 238 | 728 | 730 | 91 | 841 | 393 | 312 | 248 | 746 | 155 | 610 | 2062 | 892 | 129 | |
| 76 | 249 | 35.1 | 1093 | 175 | 856 | 948 | 242 | 737 | 741 | 91 | 853 | 399 | 312 | 253 | 762 | 158 | 623 | 2105 | 910 | 130 | |
| 77 | 246 | 35.6 | 1111 | 178 | 868 | 963 | 246 | 745 | 753 | 92 | 865 | 405 | 313 | 258 | 777 | 162 | 636 | 2141 | 926 | 132 | |
| 78 | 246 | 36.1 | 1129 | 180 | 881 | 978 | 250 | 754 | 764 | 92 | 877 | 412 | 314 | 264 | 793 | 166 | 650 | 2176 | 942 | 133 | |
| 79 | 245 | 36.6 | 1147 | 183 | 893 | 993 | 255 | 763 | 776 | 92 | 889 | 418 | 315 | 269 | 810 | 170 | 663 | 2212 | 959 | 134 | |
| 80 | 244 | 37.0 | 1165 | 185 | 905 | 1008 | 259 | 771 | 787 | 92 | 901 | 425 | 315 | 274 | 826 | 174 | 677 | 2248 | 975 | 135 | |
| 81 | 243 | 37.5 | 1182 | 188 | 917 | 1023 | 263 | 780 | 799 | 93 | 913 | 431 | 316 | 279 | 842 | 178 | 691 | 2284 | 991 | 136 | |
| 82 | 241 | 38.0 | 1200 | 190 | 929 | 1038 | 267 | 788 | 810 | 93 | 925 | 438 | 317 | 285 | 859 | 182 | 705 | 2321 | 1008 | 138 | |
| 83 | 240 | 38.4 | 1218 | 193 | 941 | 1053 | 271 | 797 | 822 | 93 | 937 | 444 | 317 | 290 | 876 | 186 | 719 | 2365 | 1026 | 140 | |
| 84 | 239 | 39.0 | 1236 | 195 | 954 | 1058 | 276 | 805 | 833 | 93 | 948 | 451 | 318 | 295 | 893 | 190 | 733 | 2402 | 1043 | 141 | |
| 85 | 238 | 39.4 | 1254 | 198 | 967 | 1084 | 280 | 813 | 845 | 94 | 960 | 457 | 319 | 301 | 980 | 194 | 747 | 2439 | 1059 | 142 | |
| 86 | 237 | 39.9 | 1272 | 200 | 979 | 1099 | 284 | 822 | 856 | 94 | 972 | 464 | 319 | 306 | 992 | 199 | 762 | 2477 | 1076 | 144 | |
| 87 | 236 | 40.4 | 1290 | 203 | 991 | 1114 | 288 | 830 | 868 | 94 | 983 | 470 | 320 | 312 | 1033 | 203 | 776 | 2514 | 1093 | 145 | |
| 88 | 235 | 40.8 | 1308 | 206 | 1003 | 1129 | 292 | 838 | 879 | 94 | 995 | 477 | 320 | 317 | 951 | 962 | 207 | 791 | 2552 | 1110 | 146 |
| 89 | 234 | 41.3 | 1326 T | 208 T | 1015 T | 1144 T | 297 T | 847 T | 901 T | 95 T | 1007 T | 1007 T | 321 T | 323 L | 323 L | 806 L | 979 L | 211 L | 1125 T | 1147 T | 1058 T |

August 1967

| LOADING | POSITIVE MOMENTS (KIP·FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP·FEET) | | | | | | | | | | | |
|-------------|-----------------------------|------|-------|-----------------|-------|-------|----------|-------|-------|--------------------------|-------|------|-----------------------------|------|------|----------------------|------|-------|------------------------------|-------|------|------------------------------|-----|-----|
| | TRUCK (T) | | | ALTERNATIVE (A) | | | LANE (L) | | | MAXIMUM POSITIVE MOMENTS | | | MOMENTS AT 0.3 POINT | | | MOMENTS AT 0.3 POINT | | | MAXIMUM NEGATIVE MOMENTS @ A | | | MAXIMUM NEGATIVE MOMENTS @ B | | |
| SPAN LENGTH | aL | SBM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | FEM | FEM | SBM | FEM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM | SBM | FEM |
| 90 | 233 | 41.8 | 1344T | 211T | 102T | 1159T | 301T | 855T | 902T | 95T | 1018T | 490T | 321T | 328L | 538L | 997L | 216L | 821L | 26.19 | 1141T | 149T | 1072T | 90 | |
| 91 | 231 | 42.3 | 1362 | 213 | 1039 | 1174 | 305 | 863 | 914 | 95 | 1030 | 496 | 322 | 334 | 550 | 1015 | 220 | 836 | 26.57 | 1158 | 150 | 1085 | 91 | |
| 92 | 230 | 42.8 | 1380 | 216 | 1051 | 1189 | 309 | 871 | 925 | 96 | 1041 | 503 | 322 | 340 | 562 | 1033 | 225 | 852 | 26.96 | 1175 | 151 | 1098 | 92 | |
| 93 | 229 | 43.2 | 1398 | 218 | 1063 | 1205 | 314 | 879 | 937 | 96 | 1053 | 509 | 323 | 346 | 575 | 1052 | 229 | 867 | 27.34 | 1192 | 153 | 1111 | 93 | |
| 94 | 228 | 43.7 | 1415 | 221 | 1075 | 1220 | 318 | 887 | 948 | 96 | 1064 | 516 | 323 | 352 | 587 | 1070 | 234 | 883 | 27.73 | 1209 | 154 | 1125 | 94 | |
| 95 | 227 | 44.2 | 1433 | 224 | 1087 | 1235 | 322 | 895 | 960 | 96 | 1076 | 522 | 324 | 357 | 597 | 1089 | 239 | 898 | 28.12 | 1226 | 156 | 1138 | 95 | |
| 96 | 226 | 44.6 | 1451 | 226 | 1099 | 1250 | 326 | 903 | 972 | 97 | 1087 | 529 | 324 | 363 | 612 | 1107 | 243 | 914 | 28.51 | 1244 | 157 | 1151 | 96 | |
| 97 | 225 | 45.1 | 1469 | 229 | 1111 | 1265 | 330 | 912 | 983 | 97 | 1098 | 535 | 324 | 369 | 625 | 1126 | 248 | 930 | 28.81 | 1259 | 158 | 1164 | 97 | |
| 98 | 224 | 45.7 | 1487 | 231 | 1124 | 1280 | 335 | 920 | 995 | 97 | 1110 | 542 | 325 | 375 | 638 | 1145 | 253 | 946 | 29.20 | 1276 | 160 | 1177 | 98 | |
| 99 | 223 | 46.1 | 1505 | 233 | 1136 | 1295 | 339 | 928 | 1006 | 98 | 1121 | 548 | 325 | 381 | 651 | 1165 | 257 | 962 | 29.60 | 1293 | 161 | 1191 | 99 | |
| 100 | 222 | 46.6 | 1523 | 236 | 1148 | 1310 | 343 | 935 | 1018 | 98 | 1132 | 555 | 326 | 388 | 664 | 1184 | 262 | 979 | 30.00 | 1310 | 163 | 1204 | 100 | |
| 101 | 221 | 47.1 | 1541 | 239 | 1160 | 1326 | 347 | 943 | 1029 | 98 | 1144 | 561 | 326 | 394 | 678 | 1203 | 267 | 995 | 30.40 | 1328 | 164 | 1217 | 101 | |
| 102 | 220 | 47.5 | 1559 | 241 | 1171 | 1341 | 352 | 951 | 1041 | 99 | 1155 | 568 | 326 | 400 | 691 | 1223 | 272 | 1012 | 30.70 | 1343 | 165 | 1230 | 102 | |
| 103 | 219 | 48.0 | 1577 | 244 | 1183 | 1356 | 356 | 959 | 1052 | 99 | 1166 | 574 | 327 | 406 | 705 | 1243 | 277 | 1029 | 31.11 | 1360 | 167 | 1243 | 103 | |
| 104 | 218 | 48.5 | 1595 | 247 | 1195 | 1371 | 360 | 967 | 1054 | 99 | 1177 | 581 | 327 | 412 | 719 | 1263 | 282 | 1045 | 31.51 | 1378 | 168 | 1256 | 104 | |
| 105 | 217 | 48.9 | 1613 | 249 | 1207 | 1386 | 364 | 975 | 1075 | 100 | 1189 | 587 | 327 | 419 | 733 | 1283 | 287 | 1062 | 31.81 | 1393 | 169 | 1269 | 105 | |
| 106 | 216 | 49.5 | 1631 | 251 | 1220 | 1401 | 369 | 983 | 1087 | 100 | 1200 | 594 | 328 | 425 | 747 | 1303 | 292 | 1080 | 32.22 | 1411 | 171 | 1283 | 106 | |
| 107 | 216 | 50.0 | 1649 | 254 | 1232 | 1416 | 373 | 991 | 1098 | 100 | 1211 | 600 | 328 | 431 | 761 | 1323 | 297 | 1097 | 32.63 | 1428 | 173 | 1296 | 107 | |
| 108 | 215 | 50.4 | 1667 | 256 | 1243 | 1431 | 377 | 999 | 1110 | 101 | 1222 | 607 | 328 | 438 | 789 | 1344 | 303 | 1114 | 33.05 | 1446 | 174 | 1309 | 108 | |
| 109 | 214 | 50.9 | 1685 | 259 | 1255 | 1446 | 381 | 1006 | 1121 | 101 | 1233 | 613 | 329 | 444 | 789 | 1365 | 308 | 1132 | 33.35 | 1461 | 175 | 1322 | 109 | |
| 110 | 213 | 51.4 | 1702 | 262 | 1267 | 1462 | 386 | 1014 | 1133 | 101 | 1244 | 620 | 329 | 451 | 804 | 1386 | 313 | 1149 | 33.77 | 1479 | 177 | 1335 | 110 | |
| 111 | 212 | 51.8 | 1720 | 264 | 1279 | 1477 | 390 | 1022 | 1144 | 101 | 1255 | 625 | 329 | 458 | 819 | 1407 | 319 | 1167 | 34.08 | 1494 | 178 | 1348 | 111 | |
| 112 | 211 | 52.3 | 1738 | 267 | 1290 | 1492 | 394 | 1030 | 1156 | 102 | 1266 | 633 | 330 | 464 | 833 | 1428 | 324 | 1185 | 34.50 | 1512 | 179 | 1361 | 112 | |
| 113 | 210 | 52.8 | 1756 | 270 | 1302 | 1507 | 399 | 1038 | 1167 | 102 | 1278 | 639 | 330 | 471 | 846 | 1449 | 329 | 1203 | 34.92 | 1530 | 181 | 1374 | 113 | |
| 114 | 209 | 53.4 | 1774 | 272 | 1315 | 1522 | 403 | 1045 | 1179 | 102 | 1289 | 646 | 330 | 478 | 863 | 1471 | 335 | 1222 | 35.23 | 1545 | 182 | 1387 | 114 | |
| 115 | 208 | 53.8 | 1792 | 274 | 1327 | 1537 | 407 | 1053 | 1190 | 103 | 1300 | 652 | 330 | 484 | 879 | 1492 | 340 | 1240 | 35.65 | 1563 | 184 | 1400 | 115 | |
| 116 | 207 | 54.3 | 1810 | 277 | 1339 | 1552 | 411 | 1061 | 1202 | 103 | 1311 | 659 | 331 | 491 | 894 | 1514 | 346 | 1258 | 36.08 | 1581 | 186 | 1413 | 116 | |
| 117 | 207 | 54.8 | 1828 | 279 | 1350 | 1567 | 416 | 1069 | 1213 | 104 | 1322 | 665 | 331 | 498 | 909 | 1536 | 352 | 1277 | 36.39 | 1596 | 187 | 1426 | 117 | |
| 118 | 206 | 55.2 | 1846 | 282 | 1362 | 1583 | 420 | 1076 | 1225 | 104 | 1333 | 672 | 331 | 505 | 925 | 1558 | 357 | 1296 | 36.82 | 1614 | 188 | 1439 | 118 | |
| 119 | 205 | 55.7 | 1864T | 285T | 1374T | 1598T | 424T | 1084T | 1236T | 104T | 1343T | 678T | 332T | 512L | 941L | 1580L | 363L | 1315L | 37.13 | 1630T | 189T | 1452T | 119 | |

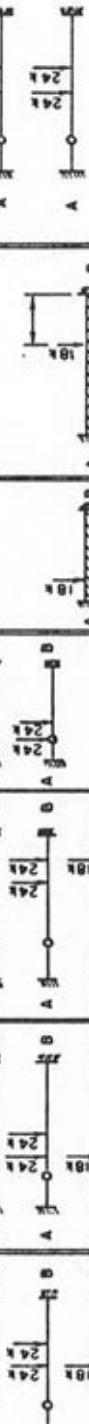
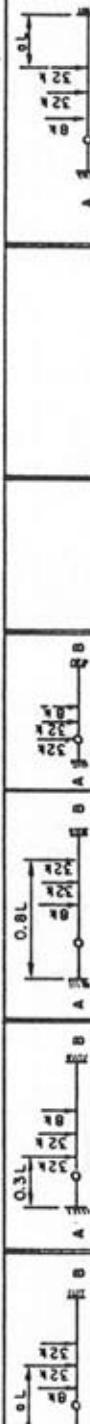
ONE LANE LIVE LOAD (HS20-44)

(IMPACT NOT INCLUDED)

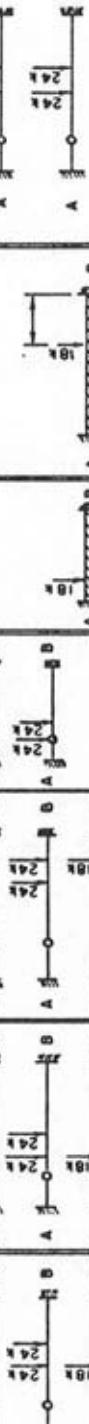
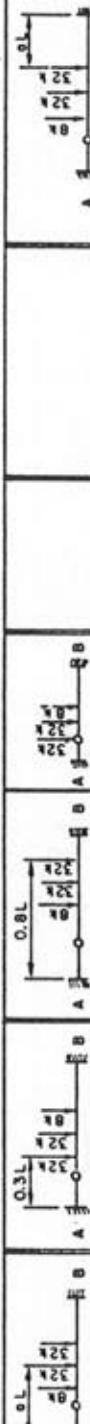
HINGE AT 1/11 POINT [0.091L]

K_{AB} = 0.033 C_{AB} = 10.000K_{BA} = 3.297 C_{BA} = 0.100

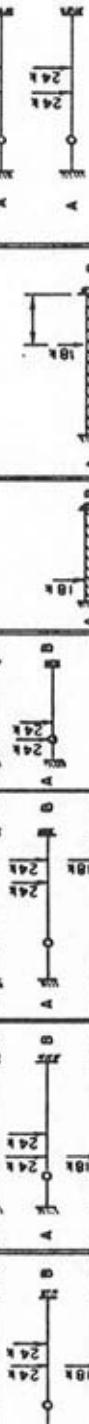
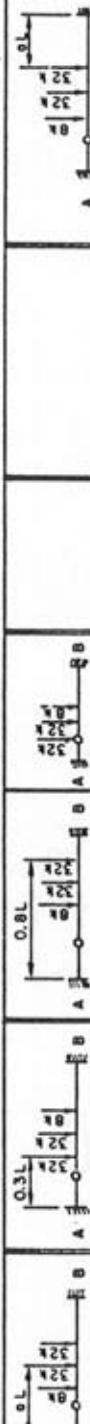
POSITIVE MOMENTS (KIP-FEET)



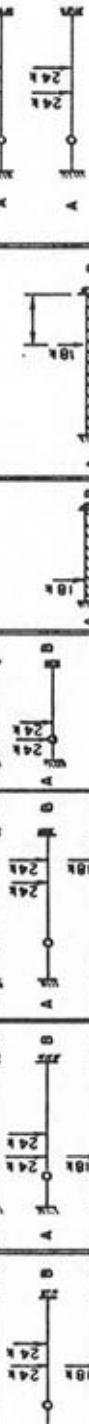
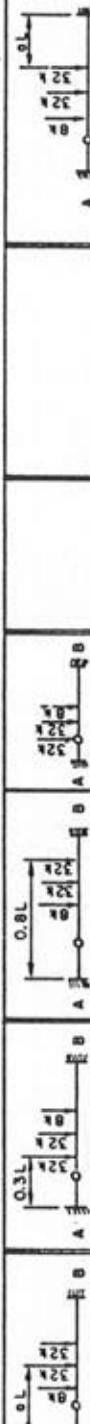
NEGATIVE MOMENTS (KIP-FEET)



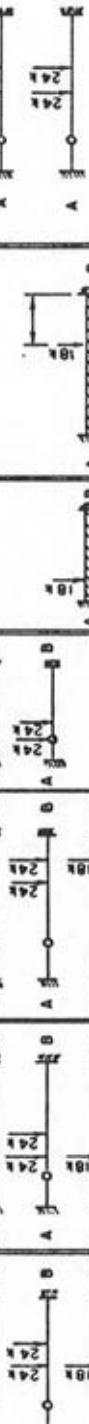
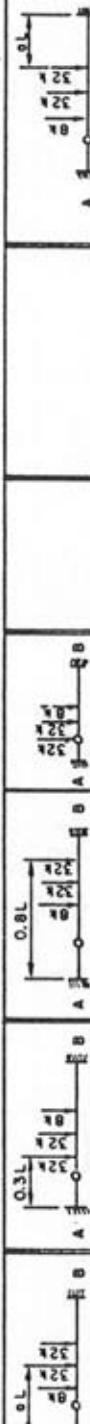
MAXIMUM POSITIVE MOMENTS



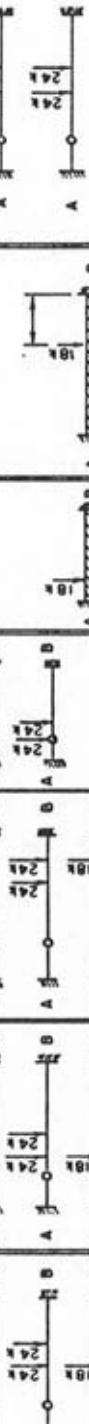
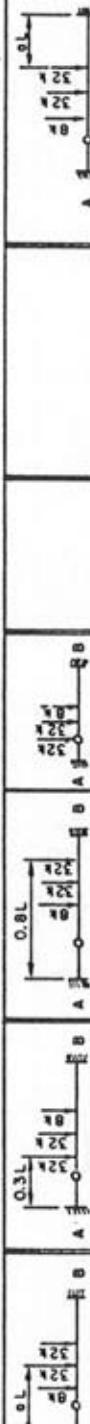
MOMENTS AT 0.3 POINT



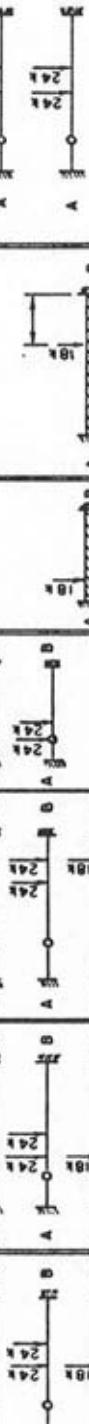
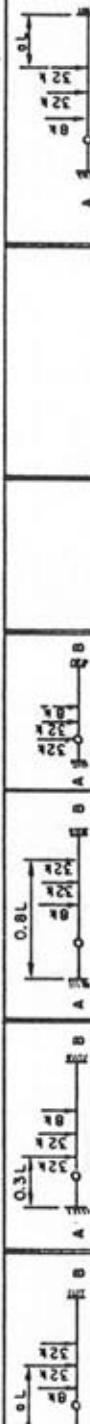
MOMENTS AT 0.8 POINT



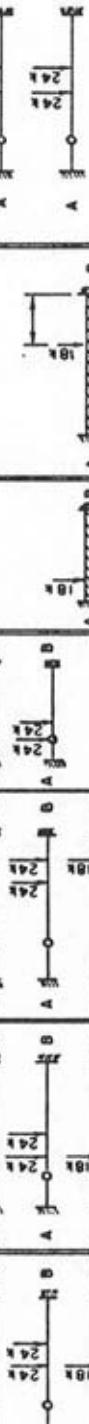
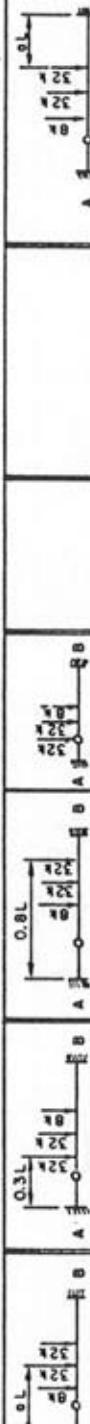
MAXIMUM NEGATIVE MOMENTS @ A



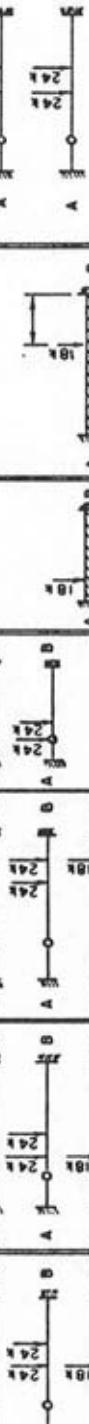
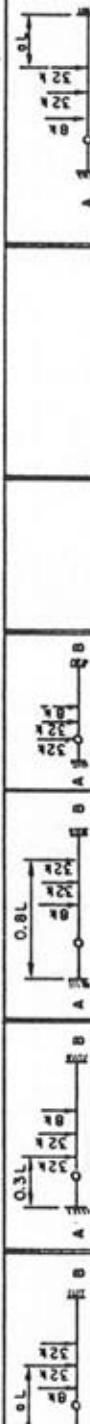
MAXIMUM NEGATIVE MOMENTS @ B



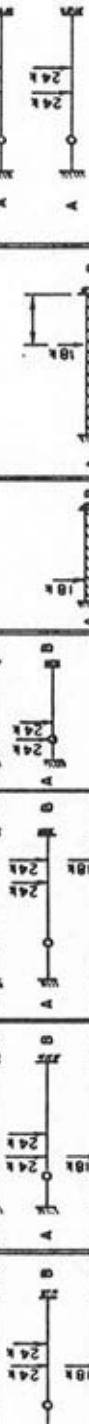
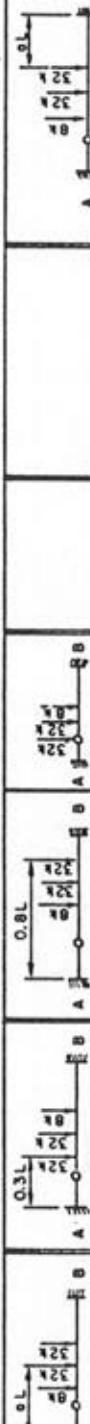
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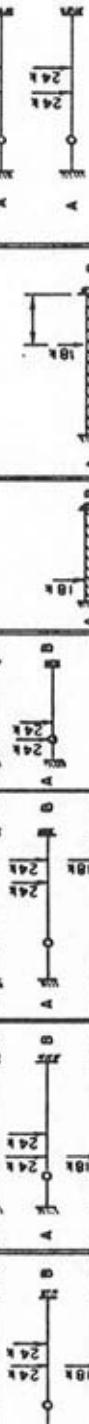
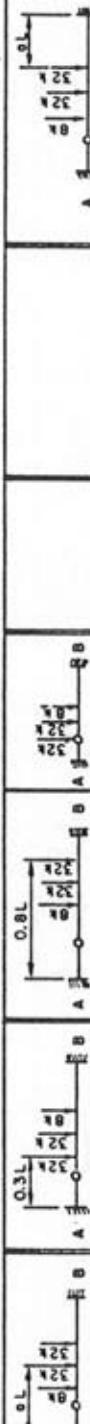
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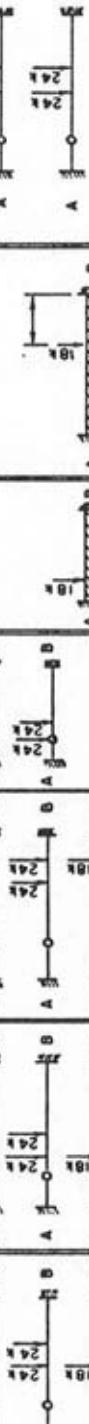
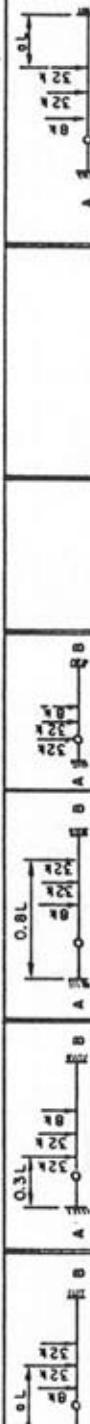
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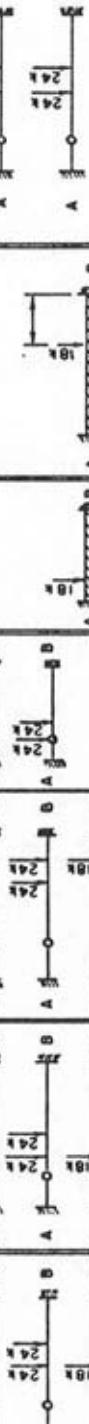
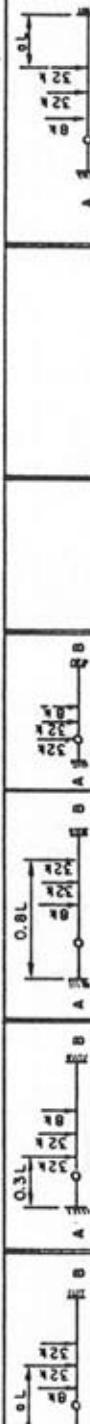
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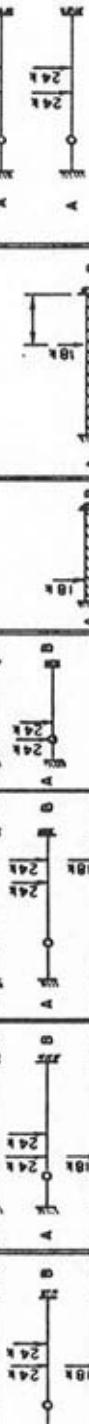
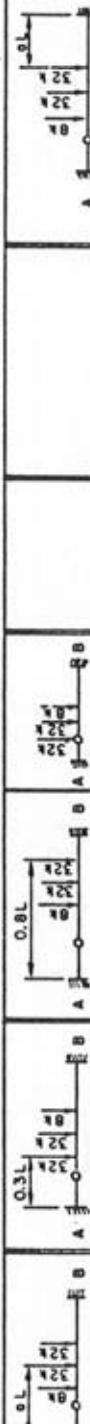
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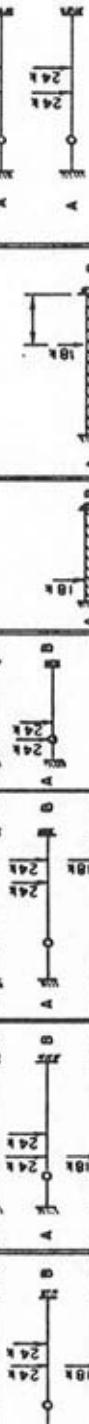
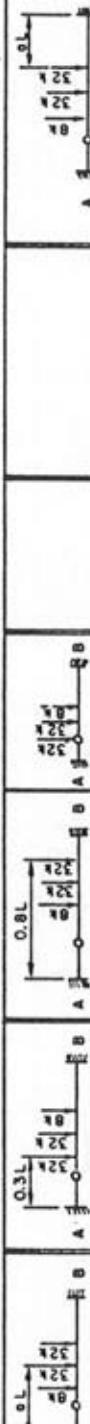
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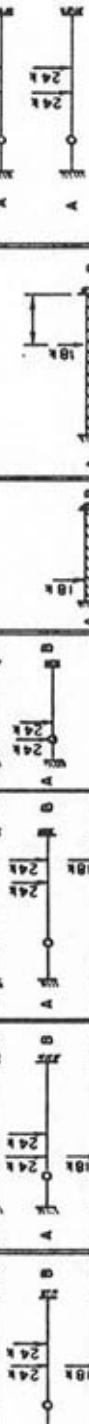
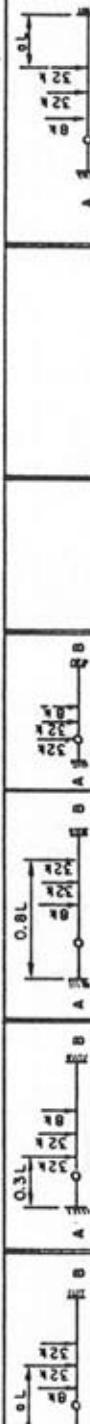
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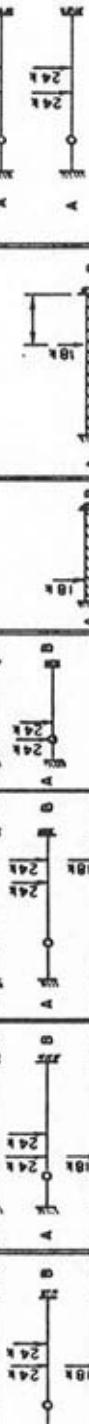
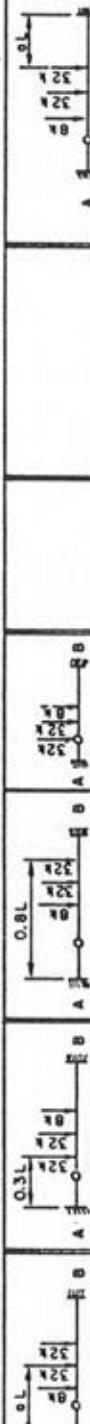
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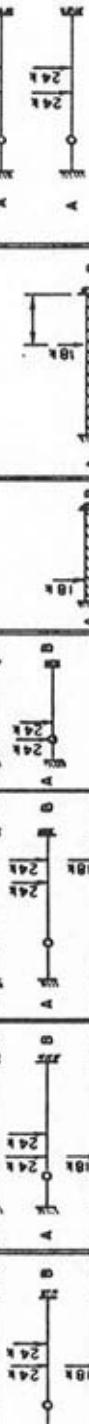
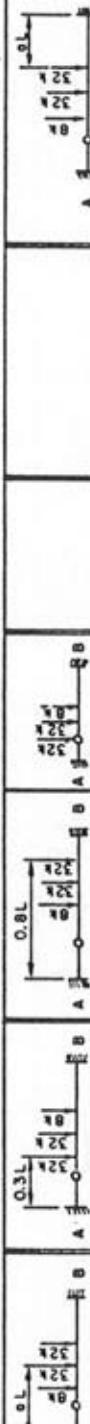
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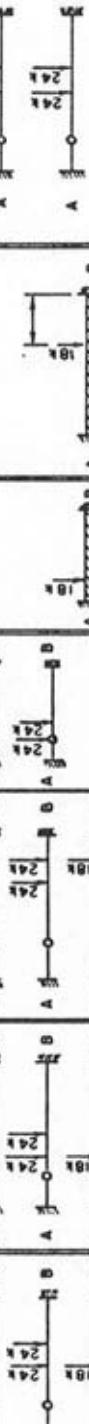
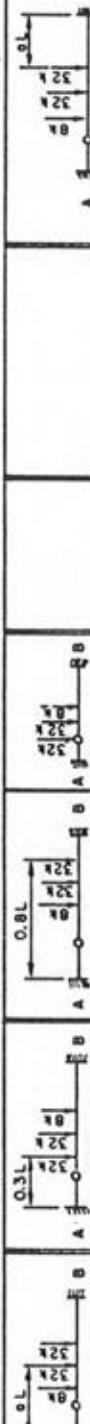
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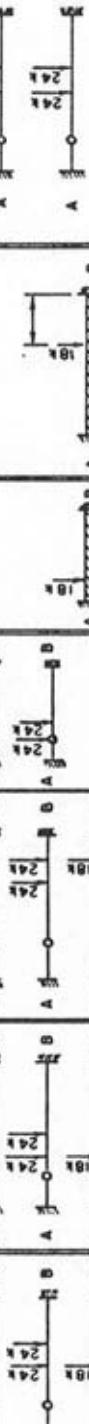
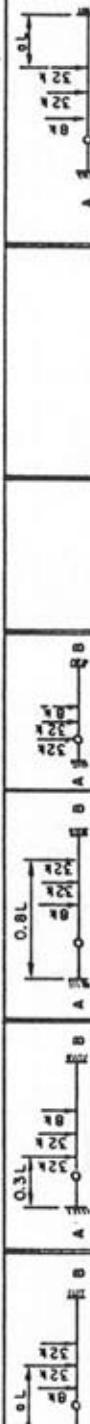
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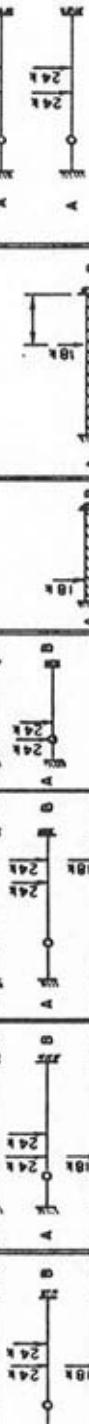
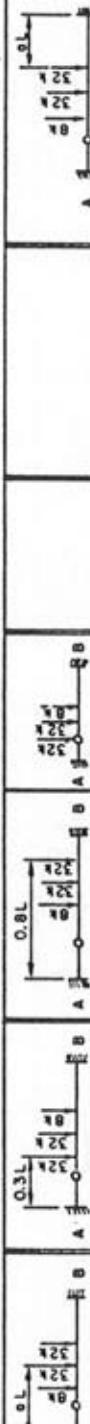
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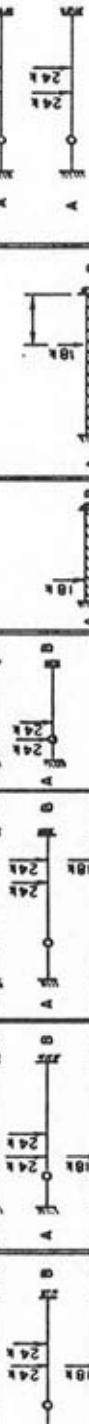
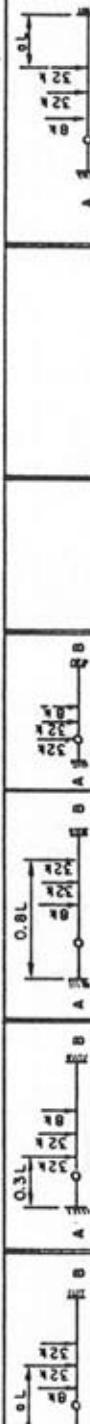
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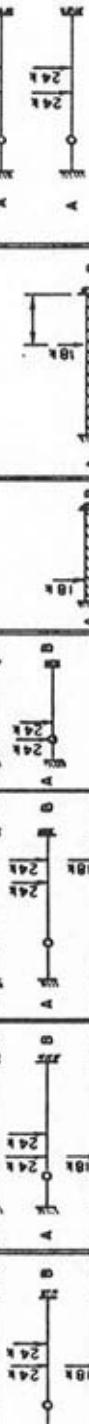
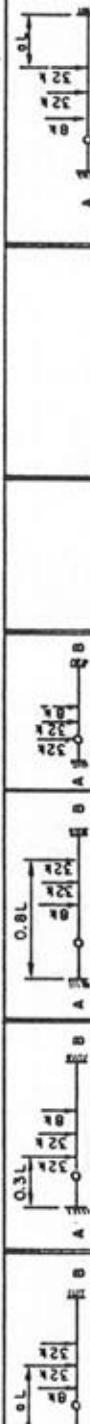
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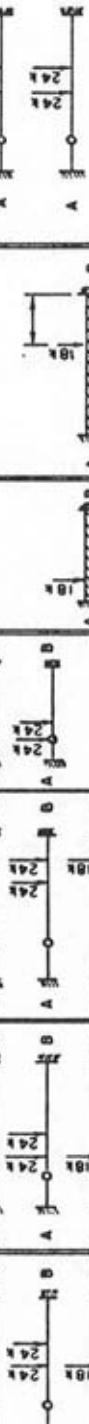
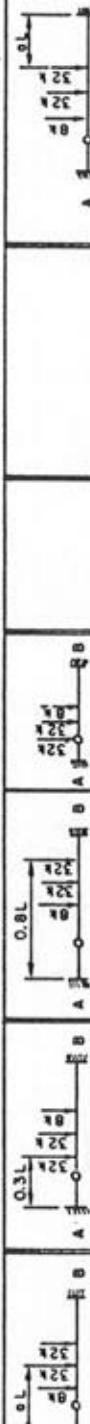
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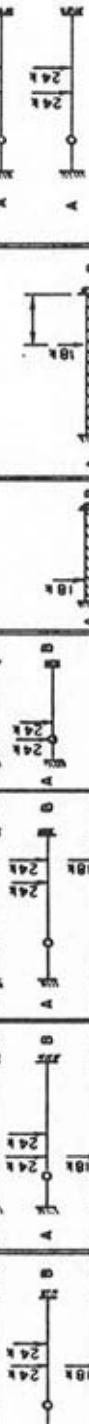
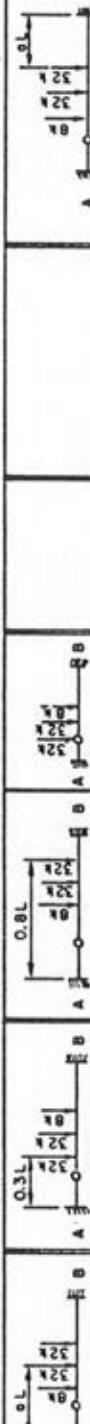
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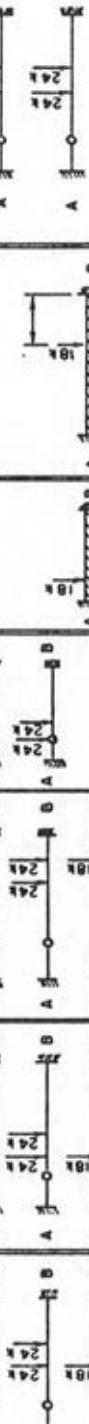
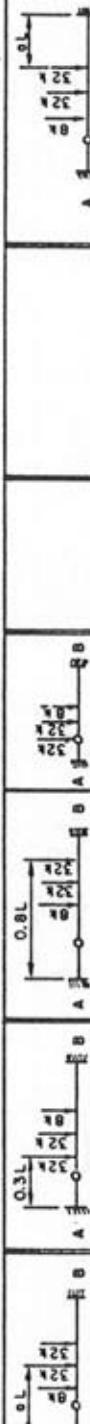
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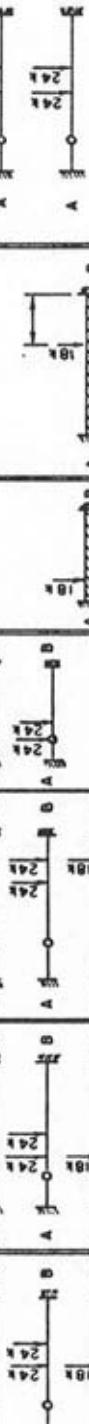
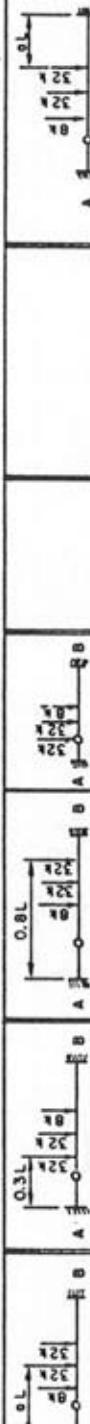
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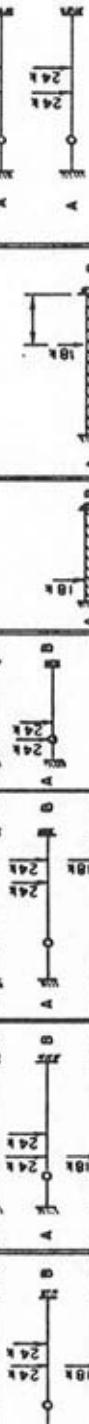
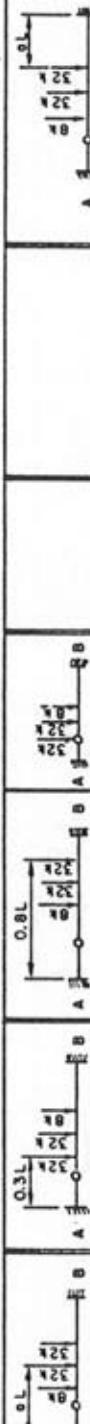
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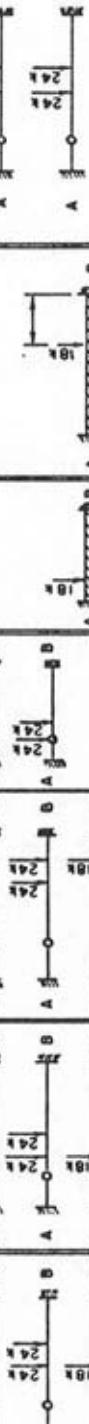
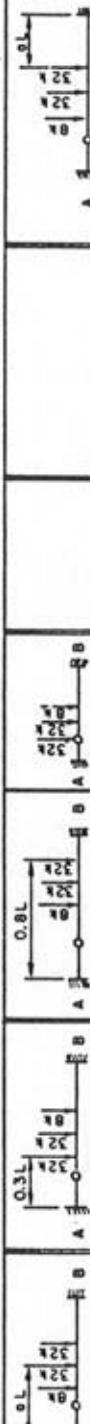
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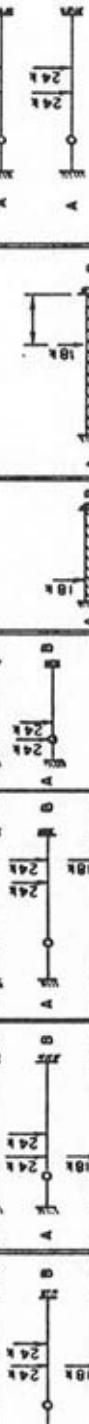
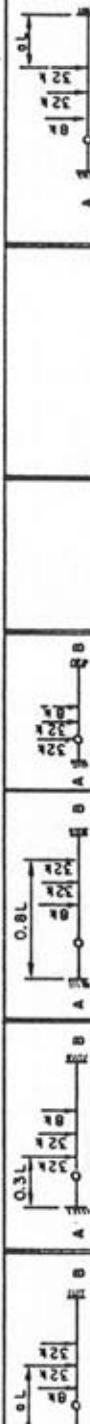
FEM @ BL



FEM @ AL



FEM @ BR



| ONE LANE LIVE LOAD (H220-44) IMPACT NOT INCLUDED HINGE AT 1/11 POINT (0.091L) K _{AB} = 0.033 C _{AB} = 10.00 K _{BA} = 3.297 C _{BA} = 0.100 | | | | | | | | | | | | | |
|---|------------------|----------------------|----------|---------|-------|-------|------|-----------------------------|----------|---------|----------------|----------------|--|
| POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | | |
| LOADING | IMPACT FACTOR | MOMENTS AT 0.3 POINT | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | |
| | | MAXIMUM | POSITIVE | MOMENTS | FEM | SBM | FEM | MAXIMUM | NEGATIVE | MOMENTS | W _A | W _B | |
| TRUCK (T) | 0.3L | ft | ft | ft | #A | #B | #A | ft | #A | #B | W = 0.64 k/ft. | W = 0.64 k/ft. | |
| ALTERNATIVE (A) | 0.3L | ft | ft | ft | #A | #B | #A | ft | #A | #B | W = 0.64 k/ft. | W = 0.64 k/ft. | |
| LANE (L) | 0.3L | ft | ft | ft | #A | #B | #A | ft | #A | #B | W = 0.64 k/ft. | W = 0.64 k/ft. | |
| 150 | 1.79 | 73.0 | 2510 | 377 | 1797 | 2142 | 578 | 1356 | 1651 | 117 | 1730 | 913 | |
| 156 | 1.78 | 73.5 | 2528 | 380 | 1809 | 2157 | 583 | 1364 | 1663 | 118 | 1741 | 920 | |
| 157 | 1.77 | 73.9 | 2546 | 382 | 1820 | 2172 | 587 | 1371 | 1674 | 118 | 1752 | 926 | |
| 158 | 1.77 | 74.4 | 2564 | 385 | 1832 | 2187 | 591 | 1379 | 1686 | 118 | 1762 | 933 | |
| 159 | 1.76 | 74.9 | 2582 | 388 | 1844 | 2202 | 595 | 1386 | 1697 | 119 | 1773 | 940 | |
| 160 | 1.75 | 75.4 | 2600 | 390 | 1855 | 2218 | 600 | 1393 | 1709 | 119 | 1783 | 946 | |
| 161 | 1.75 | 75.8 | 2618 | 393 | 1867 | 2233 | 604 | 1401 | 1720 | 120 | 1794 | 953 | |
| 162 | 1.74 | 76.3 | 2636 | 396 | 1878 | 2248 | 608 | 1408 | 1732 | 120 | 1804 | 959 | |
| 163 | 1.74 | 76.8 | 2654 | 398 | 1890 | 2263 | 613 | 1416 | 1743 | 120 | 1815 | 966 | |
| 164 | 1.73 | 77.2 | 2672 | 401 | 1901 | 2278 | 617 | 1423 | 1755 | 121 | 1825 | 972 | |
| 165 | 1.72 | 77.9 | 2690 | 402 | 1915 | 2293 | 621 | 1431 | 1766 | 121 | 1836 | 979 | |
| 166 | 1.72 | 78.4 | 2708 | 405 | 1927 | 2308 | 626 | 1438 | 1778 | 122 | 1846 | 985 | |
| 167 | 1.71 | 78.8 | 2726 | 407 | 1938 | 2323 | 630 | 1445 | 1789 | 122 | 1857 | 992 | |
| 168 | 1.71 | 79.3 | 2744 | 410 | 1950 | 2339 | 634 | 1453 | 1801 | 122 | 1867 | 998 | |
| 169 | 1.70 | 79.8 | 2762 | 413 | 1961 | 2354 | 638 | 1460 | 1812 | 123 | 1878 | 1005 | |
| 170 | 1.69 | 80.2 | 2780 | 415 | 1973 | 2369 | 643 | 1468 | 1824 | 123 | 1888 | 1011 | |
| 171 | 1.69 | 80.7 | 2798 | 418 | 1984 | 2384 | 647 | 1475 | 1836 | 124 | 1899 | 1018 | |
| 172 | 1.68 | 81.2 | 2816T | 421T | 1996T | 2399 | 651 | 1482 | 1847 | 124 | 1909 | 1024 | |
| 173 | 1.68 | 83.6 | 3169L | 783L | 2414 | 656 | 1490 | 1859 | 124 | 1920 | 1031 | 341 | |
| 174 | 1.67 | 84.0 | 3201 | 792 | 2509 | 2429 | 660 | 1497 | 1870 | 125 | 1930 | 1037 | |
| 175 | 1.67 | 84.5 | 3234 | 800 | 2535 | 2444 | 664 | 1505 | 1882 | 125 | 1941 | 1044 | |
| 176 | 1.66 | 85.0 | 3266 | 809 | 2561 | 2460 | 669 | 1512 | 1893 | 125 | 1951 | 1051 | |
| 177 | 1.66 | 85.5 | 3299 | 817 | 2588 | 2475 | 673 | 1519 | 1905 | 126 | 1962 | 1057 | |
| 178 | 1.65 | 86.0 | 3332 | 826 | 2614 | 2490 | 677 | 1527 | 1916 | 126 | 1972 | 1064 | |
| 179 | 1.64 | 86.5 | 3365L | 835L | 2641L | 2505T | 681T | 1534T | 1928T | 127T | 1983T | 1070T | |

| LOADING | POSITIVE MOMENTS (KIP·FEET) | | | | | | | | | | NEGATIVE MOMENTS (KIP·FEET) | | | | | | | | | | | | | | | |
|------------------|-----------------------------|----------|-------------|------------|------------|---------------|------------|------------|---------------|------------|-----------------------------|----------------------|----------------------|----------------------|----------------------|------------------------------|------------|------------|-----------------|------------|------------|-------------------------------|------------|-------------|------------|------------|
| | TRUCK (T) | aL FT | SBM @ aL | FEM @ A | FEM @ B | SBM @ 0.3L | FEM @ A | FEM @ B | SBM @ 0.8L | FEM @ A | FEM @ B | MAXIMUM AT 0.3 POINT | MOMENTS AT 0.8 POINT | MAXIMUM AT 0.8 POINT | MOMENTS AT 0.3 POINT | MAXIMUM NEGATIVE MOMENTS @ A | FEM @ A | FEM @ B | SBM @ 0.385L | FEM @ A | FEM @ B | MAXIMUM NEGATIVE MOMENTS AT B | FEM @ B | SBM @ aL | FEM @ A | FEM @ B |
| IMPACT FACTOR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPAN FEET | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 180 | 164 | 86.9 | 3398L | 843L | 2667L | 154L | 1939T | 127T | 1933T | 1077T | 342T | 1021L | 2152L | 3222L | 796L | 2717L | 60.30 | 2662T | 278T | 2238 | 180 | | | | | |
| 181 | 163 | 87.4 | 3431 | 852 | 2694 | 2886L | 931L | 2498L | 1951 | 127 | 2004 | 1083 | 362 | 1031 | 2176 | 3254 | 804 | 2744 | 60.82 | 2682 | 280 | 2250 | 181 | | | |
| 182 | 163 | 87.9 | 3465 | 861 | 2721 | 2914 | 940 | 2524 | 1962 | 128 | 2014 | 1090 | 342 | 1041 | 2200 | 3285 | 813 | 2771 | 61.15 | 2698 | 281 | 2263 | 182 | | | |
| 183 | 162 | 88.4 | 3499 | 870 | 2748 | 2942 | 950 | 2550 | 1974 | 128 | 2024 | 1096 | 342 | 1051 | 2224 | 3317 | 821 | 2798 | 61.49 | 2714 | 282 | 2275 | 183 | | | |
| 184 | 162 | 88.9 | 3532 | 878 | 2776 | 2971 | 959 | 2576 | 1985 | 129 | 2035 | 1103 | 342 | 1061 | 2248 | 3349 | 830 | 2826 | 61.82 | 2730 | 283 | 2289 | 184 | | | |
| 185 | 161 | 89.4 | 3556 | 887 | 2803 | 2999 | 968 | 2602 | 1997 | 129 | 2045 | 1109 | 342 | 1070 | 2273 | 3362 | 838 | 2854 | 62.34 | 2750 | 286 | 2302 | 185 | | | |
| 186 | 161 | 89.8 | 3601 | 896 | 2830 | 3028 | 978 | 2628 | 2008 | 129 | 2056 | 1116 | 343 | 1080 | 2297 | 3414 | 847 | 2881 | 62.68 | 2766 | 287 | 2314 | 186 | | | |
| 187 | 160 | 90.3 | 3635 | 905 | 2856 | 3057 | 987 | 2655 | 2020 | 130 | 2066 | 1122 | 343 | 1090 | 2322 | 3447 | 856 | 2909 | 63.02 | 2782 | 288 | 2327 | 187 | | | |
| 188 | 160 | 90.8 | 3669 | 914 | 2886 | 3086 | 997 | 2682 | 2031 | 130 | 2077 | 1129 | 343 | 1100 | 2347 | 3449 | 865 | 2937 | 63.36 | 2798 | 289 | 2340 | 188 | | | |
| 189 | 159 | 91.3 | 3704 | 924 | 2914 | 3115 | 1006 | 2708 | 2043 | 131 | 2087 | 1135 | 343 | 1111 | 2372 | 3512 | 874 | 2955 | 63.88 | 2818 | 292 | 2353 | 189 | | | |
| 190 | 159 | 91.8 | 3739 | 933 | 2942 | 3144 | 1016 | 2735 | 2054 | 131 | 2097 | 1142 | 343 | 1121 | 2397 | 3545 | 882 | 2994 | 64.22 | 2834 | 293 | 2365 | 190 | | | |
| 191 | 158 | 92.3 | 3774 | 942 | 2970 | 3174 | 1026 | 2762 | 2066 | 131 | 2108 | 1149 | 343 | 1131 | 2423 | 3578 | 891 | 3022 | 64.56 | 2850 | 294 | 2378 | 191 | | | |
| 192 | 158 | 92.7 | 3809 | 951 | 2998 | 3203 | 1035 | 2790 | 2077 | 132 | 2118 | 1155 | 343 | 1141 | 2448 | 3611 | 900 | 3051 | 64.90 | 2866 | 295 | 2391 | 192 | | | |
| 193 | 157 | 93.2 | 3844 | 960 | 3027 | 3233 | 1045 | 2817 | 2089 | 132 | 2129 | 1162 | 343 | 1151 | 2474 | 3645 | 909 | 3079 | 65.43 | 2886 | 298 | 2404 | 193 | | | |
| 194 | 157 | 93.7 | 3879 | 970 | 3055 | 3262 | 1055 | 2844 | 2100 | 133 | 2139 | 1168 | 343 | 1162 | 2499 | 3678 | 918 | 3108 | 65.77 | 2902 | 299 | 2417 | 194 | | | |
| 195 | 156 | 94.2 | 3915 | 979 | 3084 | 3292 | 1065 | 2872 | 2112 | 133 | 2149 | 1175 | 344 | 1172 | 2525 | 3712 | 928 | 3137 | 66.10 | 2918 | 300 | 2429 | 195 | | | |
| 196 | 156 | 94.7 | 3951 | 989 | 3113 | 3322 | 1074 | 2900 | 2124 | 133 | 2160 | 1181 | 344 | 1183 | 2551 | 3746 | 937 | 3166 | 66.44 | 2934 | 301 | 2442 | 196 | | | |
| 197 | 155 | 95.2 | 3987 | 998 | 3142 | 3353 | 1084 | 2928 | 2135 | 134 | 2170 | 1188 | 344 | 1193 | 2577 | 3760 | 946 | 3196 | 66.98 | 2954 | 304 | 2455 | 197 | | | |
| 198 | 155 | 95.6 | 4023 | 1008 | 3171 | 3383 | 1094 | 2956 | 2147 | 134 | 2180 | 1194 | 344 | 1203 | 2603 | 3814 | 955 | 3225 | 67.32 | 2971 | 305 | 2468 | 198 | | | |
| 199 | 154 | 96.1 | 4059 | 1017 | 3200 | 3413 | 1104 | 2984 | 2158 | 135 | 2191 | 1201 | 344 | 1214 | 2630 | 3849 | 964 | 3254 | 67.66 | 2987 | 306 | 2480 | 199 | | | |
| 200 | 154 | 96.6 | 4095 | 1027 | 3229 | 3444 | 1114 | 3012 | 2170 | 135 | 2201 | 1207 | 344 | 1225 | 2656 | 3883 | 974 | 3284 | 68.00 | 3003 | 307 | 2493 | 200 | | | |
| 201 | 153 | 97.1 | 4132 | 1036 | 3259 | 3475 | 1124 | 3040 | 2181 | 135 | 2212 | 1214 | 344 | 1235 | 2683 | 3918 | 983 | 3314 | 68.34 | 3019 | 309 | 2506 | 201 | | | |
| 202 | 153 | 97.6 | 4168 | 1046 | 3288 | 3506 | 1135 | 3069 | 2193 | 136 | 2222 | 1220 | 344 | 1246 | 2710 | 3953 | 993 | 3344 | 68.88 | 3039 | 311 | 2519 | 202 | | | |
| 203 | 152 | 98.0 | 4205 | 1056 | 3318 | 3537 | 1145 | 3098 | 2204 | 136 | 2232 | 1227 | 344 | 1257 | 2736 | 3987 | 1002 | 3374 | 69.22 | 3055 | 312 | 2531 | 203 | | | |
| 204 | 152 | 98.5 | 4242 | 1066 | 3348 | 3568 | 1155 | 3126 | 2216 | 137 | 2243 | 1234 | 345 | 1267 | 2763 | 4023 | 1012 | 3404 | 69.56 | 3072 | 314 | 2544 | 204 | | | |
| 205 | 152 | 99.0 | 4280 | 1075 | 3378 | 3599 | 1165 | 3155 | 2227 | 137 | 2253 | 1240 | 345 | 1278 | 2791 | 4058 | 1021 | 3434 | 69.90 | 3088 | 315 | 2557 | 205 | | | |
| 206 | 151 | 99.5 | 4317 | 1085 | 3408 | 3630 | 1176 | 3184 | 2239 | 137 | 2263 | 1247 | 345 | 1289 | 2818 | 4093 | 1031 | 3465 | 70.25 | 3104 | 316 | 2570 | 206 | | | |
| 207 | 151 | 100.0 | 4354 | 1095 | 3438 | 3662 | 1186 | 3214 | 2250 | 138 | 2274 | 1253 | 345 | 1300 | 2845 | 4129 | 1040 | 3495 | 70.79 | 3124 | 319 | 2582 | 207 | | | |
| 208 | 150 | 100.5 | 4392 | 1105 | 3469 | 3694 | 1196 | 3243 | 2262 | 138 | 2284 | 1260 | 345 | 1311 | 2873 | 4165 | 1050 | 3526 | 71.14 | 3140 | 320 | 2595 | 208 | | | |
| 209 | 150 | 100.9 | 4430L | 1115L | 3499L | 3725L | 1207L | 3272L | 2273T | 139T | 2294T | 1266T | 345T | 1322L | 2900L | 4200L | 1060L | 3557L | 71.48 | 3157T | 321T | 2608T | 209 | | | |

| LOADING | POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | | |
|--|-----------------------------|----------------------|-------------|------------|------------|---------------|----------------------|------------|---------------|------------|-----------------------------|------------------------------|---------------|------------|------------|------------|------------------------------|------------|-------------|------------|------------|
| | TRUCK (T) | MOMENTS AT 0.3 POINT | | | | | MOMENTS AT 0.8 POINT | | | | | MAXIMUM NEGATIVE MOMENTS @ A | | | | | MAXIMUM NEGATIVE MOMENTS @ B | | | | |
| | | aL FT | SBM @ aL | FEM @ A | FEM @ B | FEM @ 0.3L | SBM @ A | FEM @ B | FEM @ 0.8L | SBM @ B | FEM @ A | FEM @ B | SBM @ 0.3B | FEM @ A | FEM @ B | SBM @ B | FEM @ aL | FEM @ B | SBM @ aL | FEM @ A | FEM @ B |
| ONE LANE LIVE LOAD (HS20-44) <small>(IMPACT NOT INCLUDED)</small> | | | | | | | | | | | | | | | | | | | | | |
| HINGE AT 1/12 POINT (0.03 L) | | | | | | | | | | | | | | | | | | | | | |
| K _{AB} = 0.027 | | | | | | | | | | | | | | | | | | | | | |
| C _{AB} = 11,000 | | | | | | | | | | | | | | | | | | | | | |
| K _{BA} = 0.091 | | | | | | | | | | | | | | | | | | | | | |
| ALTERNATIVE(A) A | A | 14.0 | 325 | 43 | 246 | 274A | 66A | 182A | 211A | 14A | 225A | 107A | 48A | 63A | 611 | 197L | 29L | 1556L | 9.7 | 285A | 29A |
| ALTERNATIVE(A) A | A | 14.5 | 337 | 45 | 246 | 284 | 69 | 187 | 219 | 15 | 233 | 111 | 48 | 66 | 65 | 206 | 30 | 163 | 6.60 | 237T | 56T |
| ALTERNATIVE(A) A | A | 15.0 | 349 | 46 | 262 | 304 | 74 | 197 | 234 | 15 | 240 | 115A | 48A | 68 | 69 | 215 | 32 | 171 | 6.91 | 250 | 55 |
| ALTERNATIVE(A) A | A | 15.4 | 361 | 48 | 270 | 314 | 77 | 202 | 242 | 15 | 254 | 125 | 247 | 119T | 71 | 224 | 34 | 178 | 7.26 | 264 | 57 |
| LANE (L) | A | 15.9 | 373 | 49 | 278 | 324A | 79A | 207A | 250 | 16 | 261 | 130 | 209 | 77 | 82 | 243 | 37 | 194 | 7.94 | 291 | 58 |
| LANE (L) | A | 16.4 | 385 | 51 | 285 | 349T | 77T | 315T | 257 | 16 | 268 | 135 | 216 | 80 | 87 | 252 | 39 | 202 | 8.28 | 305 | 59 |
| LANE (L) | A | 16.9 | 397 | 52 | 293 | 363 | 80 | 326 | 265 | 16 | 275 | 141 | 223 | 83 | 92 | 262 | 41 | 210 | 8.62 | 320 | 63 |
| LANE (L) | A | 17.4 | 409 | 54 | 301 | 376 | 83 | 336 | 273 | 16 | 282 | 146 | 229 | 86 | 97 | 272 | 43 | 218 | 8.97 | 335 | 69 |
| LANE (L) | A | 17.8 | 421 | 56 | 309 | 390 | 87 | 346 | 280 | 16 | 289 | 152 | 234 | 89 | 102 | 282 | 45 | 226 | 9.32 | 350 | 75 |
| LANE (L) | A | 18.3 | 433 | 57 | 317 | 403 | 90 | 356 | 288 | 17 | 296 | 157 | 239 | 92 | 108 | 293 | 47 | 235 | 8.36 | 336 | 81 |
| LANE (L) | A | 18.8 | 445 | 59 | 325 | 418 | 93 | 371 | 295 | 17 | 303 | 163 | 244 | 95 | 113 | 303 | 49 | 244 | 8.69 | 351 | 82 |
| LANE (L) | A | 19.2 | 456A | 60A | 332A | 433 | 96 | 385 | 303 | 17 | 310 | 168 | 249 | 99 | 119 | 314 | 51 | 252 | 9.03 | 366 | 83 |
| LANE (L) | A | 19.4 | 503T | 85T | 424T | 449 | 100 | 400 | 311 | 17 | 317 | 174 | 253 | 102 | 125 | 324 | 53 | 261 | 9.33 | 380 | 84 |
| LANE (L) | A | 19.8 | 521 | 88 | 439 | 464 | 103 | 413 | 319 | 18 | 324 | 180 | 257 | 105 | 131 | 335 | 55 | 270 | 9.68 | 396 | 84 |
| LANE (L) | A | 20.3 | 539 | 90 | 454 | 479 | 106 | 427 | 326 | 18 | 331 | 185 | 260 | 108 | 137 | 346 | 57 | 279 | 10.03 | 412 | 85 |
| LANE (L) | A | 20.8 | 556 | 92 | 468 | 494 | 110 | 440 | 334 | 18 | 338 | 191 | 264 | 112 | 143 | 357 | 59 | 289 | 10.35 | 426 | 86 |
| LANE (L) | A | 21.2 | 574 | 94 | 483 | 509 | 113 | 453 | 342 | 18 | 344 | 197 | 267 | 115 | 149 | 369 | 62 | 298 | 10.72 | 442 | 87 |
| LANE (L) | A | 21.7 | 592 | 96 | 497 | 524 | 117 | 465 | 349 | 19 | 351 | 202 | 270 | 119 | 155 | 380 | 64 | 308 | 11.04 | 457 | 88 |
| LANE (L) | A | 22.1 | 610 | 99 | 511 | 539 | 120 | 477 | 357 | 19 | 358 | 208 | 272 | 122 | 162 | 392 | 66 | 318 | 11.42 | 474 | 89 |
| LANE (L) | A | 22.6 | 628 | 101 | 525 | 554 | 123 | 489 | 365 | 19 | 365 | 214 | 275 | 126 | 169 | 404 | 69 | 327 | 11.75 | 489 | 90 |
| LANE (L) | A | 23.1 | 646 | 103 | 539 | 570 | 127 | 501 | 372 | 19 | 372 | 220 | 278 | 129 | 175 | 416 | 71 | 337 | 12.14 | 506 | 91 |
| LANE (L) | A | 23.6 | 664 | 105 | 552 | 585 | 131 | 512 | 380 | 20 | 379 | 225 | 280 | 133 | 182 | 428 | 74 | 348 | 12.48 | 522 | 92 |
| LANE (L) | A | 24.0 | 681 | 108 | 566 | 600 | 134 | 524 | 388A | 20A | 386A | 231 | 282 | 137 | 189 | 440 | 76 | 348 | 12.83 | 537 | 93 |
| LANE (L) | A | 24.5 | 699 | 110 | 579 | 615 | 138 | 535 | 488T | 79T | 579T | 237 | 284 | 140 | 197 | 452 | 79 | 368 | 13.18 | 553 | 94 |
| LANE (L) | A | 25.0 | 717 | 112 | 593 | 630 | 141 | 546 | 499 | 79 | 592 | 243 | 286 | 144 | 204 | 465 | 81 | 379 | 13.53 | 569 | 95 |
| LANE (L) | A | 25.4 | 735 | 115 | 606 | 645 | 145 | 557 | 511 | 79 | 606 | 249 | 288 | 148 | 212 | 478 | 84 | 389 | 13.89 | 585 | 96 |
| LANE (L) | A | 25.9 | 753 | 117 | 620 | 660 | 148 | 567 | 522 | 79 | 619 | 254 | 290 | 152 | 219 | 491 | 86 | 400 | 14.25 | 602 | 97 |
| LANE (L) | A | 26.3 | 771 | 119 | 633 | 675 | 152 | 578 | 534 | 79 | 632 | 260 | 292 | 155 | 227 | 504 | 89 | 411 | 14.62 | 618 | 98 |
| LANE (L) | A | 26.8 | 788T | 122T | 646T | 690T | 156T | 588T | 545T | 80T | 646T | 266T | 293T | 159L | 235L | 517L | 92L | 422L | 14.99 | 634T | 99T |
| LANE (L) | A | 27.3 | 806T | 127T | 664T | 704T | 161T | 598T | 555T | 85T | 664T | 271T | 298T | 164T | 228 | 528 | 93 | 438 | 14.32 | 644T | 100T |
| LANE (L) | A | 27.8 | 824T | 132T | 682T | 722T | 166T | 615T | 572T | 80T | 682T | 276T | 303T | 169T | 235 | 544 | 94 | 454 | 14.69 | 664T | 105T |
| LANE (L) | A | 28.3 | 842T | 137T | 700T | 740T | 171T | 638T | 595T | 85T | 698T | 281T | 318T | 174T | 242 | 554 | 95 | 474 | 15.06 | 684T | 110T |
| LANE (L) | A | 28.8 | 860T | 142T | 718T | 758T | 176T | 656T | 613T | 90T | 718T | 286T | 323T | 179T | 251 | 564 | 96 | 494 | 15.43 | 724T | 115T |
| LANE (L) | A | 29.3 | 878T | 147T | 736T | 776T | 181T | 674T | 631T | 95T | 736T | 292T | 330T | 184T | 260 | 574 | 97 | 514 | 15.80 | 764T | 120T |
| LANE (L) | A | 29.8 | 896T | 152T | 754T | 794T | 186T | 692T | 647T | 100T | 754T | 298T | 337T | 189T | 269 | 584 | 98 | 534 | 16.17 | 804T | 125T |
| LANE (L) | A | 30.3 | 914T | 157T | 772T | 812T | 191T | 710T | 664T | 105T | 772T | 304T | 344T | 194T | 278 | 594 | 99 | 554 | 16.54 | 844T | 130T |
| LANE (L) | A | 30.8 | 932T | 162T | 790T | 830T | 196T | 728T | 682T | 110T | 790T | 310T | 354T | 199T | 287 | 604 | 100 | 574 | 16.91 | 874T | 135T |
| LANE (L) | A | 31.3 | 950T | 167T | 808T | 848T | 201T | 746T | 705T | 115T | 808T | 316T | 364T | 204T | 299 | 614 | 105 | 594 | 17.28 | 914T | 140T |
| LANE (L) | A | 31.8 | 968T | 172T | 826T | 866T | 206T | 764T | 724T | 120T | 826T | 322T | 372T | 208T | 302 | 624 | 110 | 614 | 17.65 | 954T | 145T |
| LANE (L) | A | 32.3 | 986T | 177T | 844T | 884T | 211T | 782T | 743T | 125T | 844T | 328T | 380T | 214T | 312 | 634 | 115 | 634 | 18.02 | 994T | 150T |
| LANE (L) | A | 32.8 | 1004T | 182T | 862T | 902T | 216T | 800T | 761T | 130T | 862T | 334T | 386T | 220T | 320 | 644 | 120 | 654 | 18.39 | 1034T | 155T |
| LANE (L) | A | 33.3 | 1022T | 187T | 880T | 920T | 221T | 818T | 776T | 135T | 880T | 340T | 396T | 226T | 326 | 654 | 125 | 674 | 18.76 | 1074T | 160T |
| LANE (L) | A | 33.8 | 1040T | 192T | 898T | 938T | 226T | 836T | 794T | 140T | 898T | 346T | 406T | 232T | 332 | 664 | 130 | 694 | 19.13 | 1114T | 165T |
| LANE (L) | A | 34.3 | 1058T | 197T | 916T | 956T | 231T | 854T | 812T | 145T | 916T | 352T | 412T | 237T | 337 | 674 | 135 | 714 | 19.50 | 1154T | 170T |
| LANE (L) | A | 34.8 | 1076T | 202T | 934T | 974T | 236T | 872T | 830T | 150T | 934T | 358T | 422T | 242T | 342 | 684 | 140 | 734 | 19.87 | 1194T | 175T |
| LANE (L) | A | 35.3 | 1094T | 207T | 952T | 992T | 241T | 890T | 848T | 155T | 952T | 364T | 432T | 247T | 347 | 694 | 145 | 754 | 20.24 | 1234T | 180T |
| LANE (L) | A | 35.8 | 1112T | 212T | 970T | 1010T | 246T | 908T | 866T | 160T | 970T | 370T | 442T | 252T | 352 | 704 | 150 | 774 | 20.61 | 1274T | 185T |
| LANE (L) | A | 36.3 | 1130T | 217T | 988T | 1048T | 251T | 926T | 884T | 165T | 988T | 376T | 452T | 257T | 357 | 714 | 155 | 794 | 20.98 | 1314T | 190T |
| LANE (L) | A | 36.8 | 1148T | 222T | 1006T | 1076T | 256T | 944T | 902T | 170T | 1006T | 382T | 462T | 262T | 362 | 724 | 160 | 814 | 21.35 | 1354T | 195T |
| LANE (L) | A | 37.3 | 1166T | 227T | 1024T | 1094T | 261T | 962T | 920T | 175T | 1024T | 388T | 472T | 267T | 367 | 734 | 165 | 834 | 21.72 | 1394T | 200T |
| LANE (L) | A | 37.8 | 1184T | 232T | 1042T | 1112T | 266T | 980T | 938T | 180T | 1042T | 394T | 482T | 272T | 372 | 744 | 170 | 854 | 22.09 | 1434T | 205T |
| LANE (L) | A</ | | | | | | | | | | | | | | | | | | | | |

| LOADING | POSITIVE MOMENTS (KIP-FEET) | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | |
|-------------------|--------------------------------|------------------------|-----------------|--------------------|-----------|--------------------------------|-----------------------------|--------------------|-----------|------------------------|--------------------------------|--------------------|------------|-----------|-----------|
| | TRUCK (T) | | ALTERNATIVE (A) | | LANE (L) | | ALTERNATIVE (A) | | LANE (L) | | ALTERNATIVE (A) | | | | |
| IMPACT FACTOR | MAXIMUM POSITIVE MOMENTS | AL ft | SBM #al | FEM #A | FEM #B | MAXIMUM POSITIVE MOMENTS | AL ft | SBM #al | FEM #A | FEM #B | MAXIMUM POSITIVE MOMENTS | AL ft | SBM #al | FEM #A | FEM #B |
| 0.0 | 272 | 806T | 124T | 659T | 706T | 159T | 557T | 80T | 659T | 272T | 295T | 163L | 243L | 530L | 95L |
| 0.1 | 269 | 824 | 126 | 672 | 721 | 163 | 609 | 80 | 672 | 278 | 296 | 167 | 251 | 543 | 97 |
| 0.2 | 267 | 842 | 128 | 685 | 736 | 167 | 619 | 80 | 685 | 284 | 298 | 171 | 259 | 557 | 100 |
| 0.3 | 266 | 850 | 131 | 698 | 751 | 170 | 629 | 80 | 697 | 290 | 299 | 175 | 268 | 571 | 103 |
| 0.4 | 265 | 878 | 133 | 711 | 766 | 174 | 638 | 80 | 710 | 296 | 300 | 179 | 276 | 585 | 106 |
| 0.5 | 263 | 896 | 135 | 724 | 781 | 178 | 646 | 80 | 723 | 301 | 301 | 184 | 285 | 599 | 103 |
| 0.6 | 262 | 814 | 137 | 737 | 796 | 181 | 658 | 81 | 736 | 307 | 303 | 188 | 294 | 613 | 112 |
| 0.7 | 260 | 931 | 140 | 750 | 811 | 185 | 667 | 81 | 748 | 313 | 304 | 192 | 303 | 627 | 115 |
| 0.8 | 259 | 949 | 142 | 762 | 827 | 189 | 677 | 81 | 761 | 319 | 305 | 196 | 312 | 642 | 118 |
| 0.9 | 258 | 967 | 145 | 775 | 842 | 193 | 686 | 81 | 773 | 325 | 306 | 201 | 321 | 657 | 122 |
| 1.0 | 256 | 985 | 147 | 787 | 857 | 196 | 696 | 81 | 786 | 331 | 307 | 205 | 331 | 672 | 125 |
| 1.1 | 255 | 1003 | 149 | 800 | 872 | 200 | 705 | 81 | 798 | 337 | 308 | 209 | 340 | 687 | 128 |
| 1.2 | 254 | 1021 | 151 | 813 | 887 | 204 | 714 | 82 | 810 | 343 | 309 | 214 | 350 | 702 | 131 |
| 1.3 | 253 | 1039 | 154 | 825 | 902 | 208 | 723 | 82 | 823 | 349 | 309 | 218 | 360 | 717 | 135 |
| 1.4 | 251 | 1057 | 156 | 838 | 917 | 211 | 732 | 82 | 835 | 355 | 310 | 223 | 369 | 732 | 138 |
| 1.5 | 250 | 1074 | 159 | 850 | 932 | 215 | 741 | 82 | 847 | 360 | 311 | 227 | 380 | 748 | 141 |
| 1.6 | 249 | 1092 | 161 | 863 | 948 | 219 | 750 | 82 | 859 | 366 | 312 | 232 | 390 | 764 | 145 |
| 1.7 | 248 | 1110 | 163 | 876 | 963 | 223 | 759 | 83 | 871 | 372 | 313 | 237 | 400 | 780 | 148 |
| 1.8 | 246 | 1128 | 165 | 888 | 978 | 226 | 768 | 83 | 883 | 378 | 313 | 241 | 410 | 796 | 152 |
| 1.9 | 245 | 1146 | 168 | 900 | 993 | 230 | 777 | 83 | 895 | 384 | 314 | 246 | 421 | 812 | 155 |
| 2.0 | 244 | 1164 | 170 | 912 | 1008 | 234 | 786 | 83 | 907 | 390 | 315 | 251 | 432 | 828 | 159 |
| 2.1 | 243 | 1182 | 173 | 925 | 1023 | 238 | 794 | 84 | 919 | 396 | 315 | 256 | 443 | 845 | 163 |
| 2.2 | 241 | 1200 | 175 | 938 | 1038 | 242 | 803 | 84 | 931 | 402 | 316 | 260 | 454 | 861 | 166 |
| 2.3 | 240 | 1218 | 177 | 950 | 1053 | 245 | 812 | 84 | 943 | 408 | 317 | 265 | 465 | 878 | 170 |
| 2.4 | 239 | 1236 | 179 | 962 | 1068 | 249 | 820 | 84 | 955 | 414 | 317 | 270 | 476 | 895 | 174 |
| 2.5 | 238 | 1254 | 182 | 974 | 1084 | 253 | 829 | 84 | 966 | 420 | 318 | 275 | 487 | 912 | 178 |
| 2.6 | 237 | 1271 | 184 | 986 | 1099 | 257 | 838 | 85 | 978 | 426 | 318 | 280 | 499 | 930 | 182 |
| 2.7 | 236 | 1289 | 187 | 998 | 1114 | 260 | 846 | 85 | 980 | 432 | 319 | 285 | 511 | 957 | 185 |
| 2.8 | 235 | 1307 | 188 | 1011 | 1129 | 264 | 855 | 85 | 1001 | 438 | 319 | 290 | 522 | 965 | 187 |
| 2.9 | 234 | 1325T | 191T | 1023T | 1144T | 268T | 863T | 85T | 1013T | 444T | 320T | 295L | 534L | 982L | 193L |
| IMPACT FACTORS | | W = 0.64 K/FT. | | W = 0.64 K/FT. | | W = 0.64 K/FT. | | W = 0.64 K/FT. | | W = 0.64 K/FT. | | W = 0.64 K/FT. | | | |
| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | |
| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | |
| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | |
| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | |
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| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | |
| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | |
| IMPACT FACTORS | | IMPACT NOT INCLUDED | | IMPACT INCLUDED | | | | | | | | | | | |

| LOADING | POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | | | |
|-----------------------------|-----------------------------|--------------|------------|-----------------|------------|------------|------------|----------------|------------|--------------------------|------------|----------------|-----------------------------|------------|------------|----------------------|------------|------------|--------------------------|--------------|------------|-------------------------------|------------|--|
| | TRUCK (T) | | | ALTERNATIVE (A) | | | LANE (L) | | | MAXIMUM POSITIVE MOMENTS | | | MOMENTS AT 0.3 POINT | | | MOMENTS AT 0.8 POINT | | | MAXIMUM NEGATIVE MOMENTS | | | MAXIMUM NEGATIVE MOMENTS AT B | | |
| IMPACT FACTOR OF SPAN | al. ft. | SBM @ al. | FEM @ A | SBM @ 0.3 L | FEM @ A | SBM @ B | FEM @ B | SBM @ 0.8 L | FEM @ A | SBM @ B | FEM @ B | SBM @ 0.8 L | FEM @ A | SBM @ B | FEM @ B | SBM @ 0.388 L | FEM @ A | SBM @ B | FEM @ B | SBM @ al. | FEM @ A | SBM @ al. | FEM @ B | |
| 90 | .233 | 41.4 | 1343 T | 193 T | 1035 T | 1159 T | 272 T | 872 T | 902 T | 86 T | 1025 T | 450 T | 320 T | 301 L | 546 L | 1000 L | 197 L | 832 L | 2645 | 1147 T | 136 T | 1081 T | 90 | |
| 91 | .231 | 41.9 | 1361 | 196 | 1048 | 1174 | 276 | 880 | 914 | 86 | 1036 | 456 | 321 | 306 | 559 | 1018 | 201 | 847 | 2684 | 1164 | 137 | 1095 | 91 | |
| 92 | .230 | 42.3 | 1329 | 198 | 1060 | 1189 | 280 | 888 | 925 | 86 | 1048 | 462 | 321 | 311 | 571 | 1036 | 206 | 863 | 2723 | 1181 | 139 | 1108 | 92 | |
| 93 | .229 | 42.8 | 1397 | 201 | 1072 | 1205 | 283 | 897 | 937 | 87 | 1059 | 467 | 322 | 316 | 584 | 1055 | 210 | 878 | 2762 | 1198 | 140 | 1121 | 93 | |
| 94 | .228 | 43.3 | 1415 | 202 | 1085 | 1220 | 287 | 905 | 948 | 87 | 1071 | 473 | 322 | 322 | 596 | 1073 | 214 | 894 | 2801 | 1216 | 141 | 1135 | 94 | |
| 95 | .227 | 43.8 | 1433 | 205 | 1097 | 1235 | 291 | 913 | 960 | 87 | 1082 | 479 | 323 | 327 | 609 | 1092 | 218 | 910 | 2840 | 1233 | 143 | 1148 | 95 | |
| 96 | .226 | 44.3 | 1451 | 207 | 1109 | 1250 | 295 | 922 | 972 | 87 | 1094 | 485 | 323 | 333 | 622 | 1111 | 222 | 926 | 2880 | 1250 | 144 | 1161 | 96 | |
| 97 | .225 | 44.7 | 1468 | 210 | 1121 | 1265 | 299 | 930 | 983 | 88 | 1105 | 491 | 323 | 338 | 635 | 1130 | 227 | 940 | 2910 | 1265 | 145 | 1175 | 97 | |
| 98 | .224 | 45.1 | 1485 | 211 | 1131 | 1280 | 303 | 938 | 995 | 33 | 1116 | 497 | 324 | 344 | 648 | 1149 | 231 | 959 | 2950 | 1282 | 146 | 1188 | 98 | |
| 99 | .223 | 45.6 | 1504 | 215 | 1144 | 1295 | 306 | 946 | 1006 | 88 | 1128 | 503 | 324 | 349 | 661 | 1168 | 235 | 975 | 2990 | 1300 | 148 | 1201 | 99 | |
| 100 | .222 | 46.1 | 1522 | 217 | 1156 | 1310 | 310 | 955 | 1018 | 88 | 1139 | 509 | 325 | 355 | 675 | 1187 | 240 | 992 | 3030 | 1317 | 149 | 1214 | 100 | |
| 101 | .221 | 46.6 | 1540 | 219 | 1168 | 1326 | 314 | 963 | 1029 | 89 | 1150 | 515 | 325 | 360 | 688 | 1207 | 244 | 1008 | 3070 | 1334 | 150 | 1228 | 101 | |
| 102 | .220 | 47.1 | 1558 | 221 | 1181 | 1341 | 318 | 971 | 1041 | 89 | 1162 | 521 | 325 | 366 | 702 | 1227 | 249 | 1025 | 3401 | 1350 | 151 | 1241 | 102 | |
| 103 | .219 | 47.6 | 1576 | 224 | 1193 | 1356 | 322 | 979 | 1052 | 89 | 1173 | 527 | 326 | 372 | 716 | 1246 | 253 | 1042 | 3141 | 1367 | 153 | 1254 | 103 | |
| 104 | .218 | 48.0 | 1594 | 226 | 1205 | 1371 | 326 | 987 | 1064 | 90 | 1184 | 533 | 326 | 377 | 730 | 1266 | 258 | 1059 | 3182 | 1385 | 154 | 1267 | 104 | |
| 105 | .217 | 48.5 | 1612 | 228 | 1217 | 1386 | 329 | 995 | 1075 | 90 | 1195 | 539 | 326 | 383 | 744 | 1287 | 263 | 1077 | 3213 | 1400 | 155 | 1281 | 105 | |
| 106 | .216 | 49.0 | 1630 | 231 | 1229 | 1401 | 333 | 1003 | 1087 | 90 | 1207 | 545 | 327 | 389 | 758 | 1307 | 267 | 1094 | 3254 | 1417 | 156 | 1294 | 106 | |
| 107 | .216 | 49.4 | 1648 | 233 | 1241 | 1416 | 337 | 1012 | 1098 | 90 | 1218 | 551 | 327 | 395 | 772 | 1327 | 272 | 1112 | 3296 | 1435 | 158 | 1307 | 107 | |
| 108 | .215 | 49.9 | 1666 | 236 | 1253 | 1431 | 341 | 1020 | 1110 | 91 | 1229 | 557 | 327 | 401 | 787 | 1348 | 277 | 1129 | 3337 | 1453 | 159 | 1320 | 108 | |
| 109 | .214 | 50.4 | 1683 | 238 | 1264 | 1446 | 345 | 1028 | 1121 | 91 | 1240 | 563 | 327 | 407 | 802 | 1369 | 282 | 1147 | 3368 | 1468 | 160 | 1333 | 109 | |
| 110 | .213 | 50.9 | 1702 | 240 | 1278 | 1462 | 349 | 1036 | 1133 | 91 | 1251 | 569 | 328 | 413 | 816 | 1390 | 286 | 1165 | 3410 | 1486 | 162 | 1346 | 110 | |
| 111 | .212 | 51.4 | 1719 | 242 | 1289 | 1477 | 352 | 1044 | 1144 | 92 | 1262 | 575 | 328 | 419 | 831 | 1411 | 291 | 1183 | 3441 | 1501 | 163 | 1360 | 111 | |
| 112 | .211 | 51.9 | 1737 | 245 | 1301 | 1492 | 356 | 1052 | 1156 | 92 | 1273 | 581 | 328 | 425 | 846 | 1432 | 296 | 1201 | 3483 | 1519 | 164 | 1373 | 112 | |
| 113 | .210 | 52.3 | 1755 | 247 | 1313 | 1507 | 360 | 1060 | 1167 | 92 | 1285 | 587 | 329 | 431 | 851 | 1453 | 301 | 1220 | 3526 | 1537 | 165 | 1386 | 113 | |
| 114 | .209 | 52.8 | 1773 | 250 | 1325 | 1522 | 364 | 1068 | 1179 | 93 | 1296 | 593 | 329 | 437 | 877 | 1475 | 306 | 1228 | 3557 | 1552 | 167 | 1399 | 114 | |
| 115 | .208 | 53.2 | 1791 | 252 | 1337 | 1537 | 368 | 1076 | 1190 | 93 | 1307 | 599 | 329 | 443 | 892 | 1496 | 311 | 1257 | 3599 | 1570 | 168 | 1412 | 115 | |
| 116 | .207 | 53.7 | 1809 | 254 | 1349 | 1552 | 372 | 1084 | 1202 | 93 | 1318 | 605 | 329 | 450 | 908 | 1518 | 316 | 1226 | 3642 | 1588 | 170 | 1425 | 116 | |
| 117 | .207 | 54.2 | 1827 | 257 | 1360 | 1567 | 376 | 1092 | 1213 | 93 | 1329 | 611 | 330 | 456 | 923 | 1540 | 322 | 1224 | 3674 | 1604 | 171 | 1438 | 117 | |
| 118 | .206 | 54.6 | 1845 | 259 | 1372 | 1583 | 379 | 1100 | 1225 | 94 | 1340 | 617 | 330 | 462 | 939 | 1562 | 327 | 1313 | 3717 | 1622 | 172 | 1452 | 118 | |
| 119 | .205 | 55.1 | 1863 T | 262 T | 1384 T | 1598 T | 381 T | 1102 T | 1236 T | 94 T | 1351 T | 623 T | 330 T | 469 L | 955 L | 1585 L | 332 L | 1393 L | 3748 | 1637 T | 173 T | 1455 T | 119 | |

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| LOADING | POSITIVE MOMENTS (KIP-FEET) | | | | | | | | NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | MAXIMUM NEGATIVE MOMENTS AT 0 | | | | |
|---|---------------------------------|-------------------|-------------------|---------------|-------------------|-------------------|---------------|-------------------|-----------------------------|---------------------------------|-------------------|-------------------|----------------|-------------------|-------------------|-------------------------------|-------------------------------|----------------|----------------|----------------|--|
| | MAXIMUM MOMENTS AT 0.3 POINT | FEM # A | FEM # B | SBM # 0.3L | FEM # A | FEM # B | SBM # 0.8L | FEM # A | FEM # B | MAXIMUM MOMENTS AT 0.8 POINT | FEM # A | FEM # B | SBM # 0.38L | FEM # A | FEM # B | MAXIMUM NEGATIVE MOMENTS AT 0 | FEM # A | FEM # B | FEM # A | FEM # B | |
| TRUCK (T) | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.38L | 5BM # 1L FT | 5BM # 1L FT | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | |
| ALTERNATIVE (A) | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.38L | 5BM # 1L FT | 5BM # 1L FT | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | |
| LANE (L) | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.38L | 5BM # 1L FT | 5BM # 1L FT | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | |
| HINGE AT 1/2 POINT (0.083 L) | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.3L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.8L | 5BM # 1L FT | 5BM # 1L FT | 0.38L | 5BM # 1L FT | 5BM # 1L FT | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | W = 0.64 K/FT. | |
| K _{A0} = 0.027 C _{A0} = 11 0000 C _{B0} = 0 091 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

August 1967

| ONE LANE LIVE LOAD (HS 20-44) IMPACT NOT INCLUDED HINGE AT 1/2 POINT (0.083L) $K_{AB} = 0.027$ $C_{AB} = 11.000$ $K_{BA} = 3.270$ $C_{BA} = 0.091$ | | | | | | | | | | | | |
|--|----------------------|------|-------|------|-------|-------|----------------------|-------|-------|------|--------|------|
| POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | |
| LOADING | MOMENTS AT 0.3 POINT | | | | | | MOMENTS AT 0.8 POINT | | | | | |
| | #L | FEM | FEM | FEM | FEM | SBM | #L | FEM | FEM | FEM | SBM | #B |
| TRUCK (T) | A | 1.0 | 1.25 | 1.25 | 1.0 | 0.3L | 0.8L | #A | #B | #A | 0.388L | #B |
| ALTERNATIVE (A) | A | 1.0 | 1.25 | 1.25 | 1.0 | | | | | | | |
| LANE (L) | A | 1.0 | 1.25 | 1.25 | 1.0 | | | | | | | |
| W = 0.64 K/ft. | | | | | | | | | | | | |
| NEGATIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | |
| W = 0.64 K/ft. | | | | | | | | | | | | |
| LOADING | MOMENTS AT 0.3 POINT | | | | | | MOMENTS AT 0.8 POINT | | | | | |
| | #L | FEM | FEM | FEM | FEM | SBM | #L | FEM | FEM | FEM | SBM | #B |
| TRUCK (T) | A | 1.0 | 1.25 | 1.25 | 1.0 | 0.3L | 0.8L | #A | #B | #A | 0.388L | #B |
| ALTERNATIVE (A) | A | 1.0 | 1.25 | 1.25 | 1.0 | | | | | | | |
| LANE (L) | A | 1.0 | 1.25 | 1.25 | 1.0 | | | | | | | |
| W = 0.64 K/ft. | | | | | | | | | | | | |
| MAXIMUM POSITIVE MOMENTS | | | | | | | | | | | | |
| MAXIMUM FEM | #L | SBM | FEM | FEM | FEM | SBM | #L | FEM | FEM | FEM | SBM | #B |
| SPANNING | #L | #A | #L | #A | #B | #B | #A | #B | #A | #B | #B | #B |
| SECTION | #L | | | | | | | | | | | |
| 150 | 182 | 69.9 | 2419T | 334T | 1752T | 2066T | 503T | 1349T | 1594T | 104T | 1686T | 808T |
| 151 | 181 | 70.4 | 2437 | 337 | 1764 | 2082 | 507 | 1357 | 1605 | 105 | 1696 | 814 |
| 152 | 181 | 70.8 | 2455 | 339 | 1775 | 2097 | 511 | 1365 | 1617 | 105 | 1707 | 820 |
| 153 | 180 | 71.3 | 2473 | 342 | 1787 | 2112 | 515 | 1372 | 1628 | 105 | 1717 | 826 |
| 154 | 179 | 71.8 | 2491 | 344 | 1798 | 2127 | 519 | 1380 | 1640 | 106 | 1728 | 832 |
| 155 | 179 | 72.2 | 2509 | 347 | 1810 | 2142 | 523 | 1388 | 1651 | 106 | 1739 | 838 |
| 156 | 178 | 72.7 | 2526 | 349 | 1822 | 2157 | 527 | 1395 | 1663 | 106 | 1749 | 844 |
| 157 | 177 | 73.3 | 2545 | 350 | 1836 | 2172 | 530 | 1403 | 1674 | 107 | 1760 | 850 |
| 158 | 177 | 73.8 | 2563 | 353 | 1847 | 2187 | 534 | 1411 | 1686 | 107 | 1771 | 856 |
| 159 | 176 | 74.3 | 2581 | 355 | 1859 | 2202 | 538 | 1418 | 1697 | 107 | 1781 | 862 |
| 160 | 175 | 74.7 | 2599 | 357 | 1870 | 2218 | 542 | 1426 | 1709 | 108 | 1792 | 868 |
| 161 | 175 | 75.2 | 2616 | 360 | 1882 | 2233 | 546 | 1434 | 1720 | 108 | 1802 | 874 |
| 162 | 174 | 75.7 | 2634 | 362 | 1894 | 2248 | 550 | 1441 | 1732 | 108 | 1813 | 880 |
| 163 | 174 | 76.1 | 2652 | 365 | 1905 | 2263 | 554 | 1449 | 1743 | 109 | 1823 | 886 |
| 164 | 173 | 76.6 | 2670 | 367 | 1917 | 2278 | 558 | 1457 | 1755 | 109 | 1834 | 892 |
| 165 | 172 | 77.1 | 2688 | 370 | 1929 | 2293 | 562 | 1464 | 1766 | 109 | 1845 | 898 |
| 166 | 172 | 77.5 | 2706 | 372 | 1940 | 2308 | 565 | 1472 | 1778 | 110 | 1855 | 904 |
| 167 | 171 | 78.0 | 2724 | 374 | 1952 | 2323 | 569 | 1480 | 1789 | 110 | 1866 | 910 |
| 168 | 171 | 78.5 | 2742 | 377 | 1964 | 2339 | 573 | 1487 | 1801 | 110 | 1876 | 916 |
| 169 | 170 | 78.9 | 2760 | 379 | 1975 | 2354 | 577 | 1495 | 1812 | 111 | 1887 | 922 |
| 170 | 169 | 79.4 | 2778T | 382T | 1987T | 2369 | 581 | 1503 | 1824 | 111 | 1897 | 928 |
| 171 | 169 | 81.9 | 3103L | 701L | 2437L | 2484 | 585 | 1510 | 1836 | 111 | 1908 | 934 |
| 172 | 168 | 82.4 | 3135 | 709 | 2493 | 2399 | 589 | 1518 | 1847 | 112 | 1918 | 940 |
| 173 | 168 | 82.9 | 3167 | 716 | 2519 | 2414 | 593 | 1525 | 1859 | 112 | 1929 | 946 |
| 174 | 167 | 83.3 | 3199 | 724 | 2545 | 2429 | 597 | 1533 | 1870 | 113 | 1939 | 952 |
| 175 | 167 | 83.8 | 3232 | 732 | 2572 | 2444 | 600 | 1541 | 1882 | 113 | 1950 | 958 |
| 176 | 166 | 84.3 | 3264 | 740 | 2598 | 2460 | 604 | 1548 | 1893 | 113 | 1960 | 964 |
| 177 | 166 | 84.8 | 3297 | 747 | 2625 | 2475 | 608 | 1556 | 1905 | 114 | 1971 | 970 |
| 178 | 165 | 85.3 | 3330 | 755 | 2652 | 2490T | 612T | 1564T | 1916 | 114 | 1981 | 976 |
| 179 | 164 | 85.7 | 3363L | 763L | 2679L | 2830L | 633L | 1572T | 1928T | 114T | 1992T | 982T |

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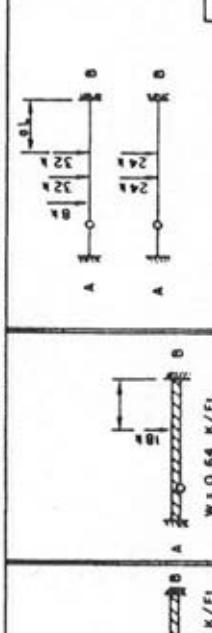
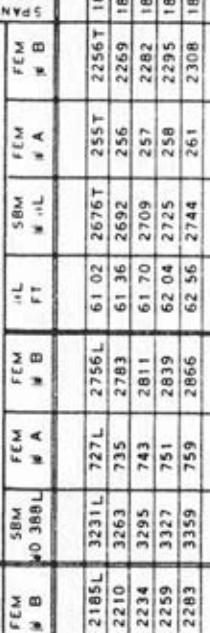
| ONE LANE LIVE LOAD (HS 20-44) | | | | | | | | | | | | |
|---|--------------------------|---------------|----------------------|---------------|----------------------|---------------|-------------------------------|-------|-------------------------------|------|-------------------------------|---|
| <small>(IMPACT NOT INCLUDED)</small> | | | | | | | | | | | | |
| HINGE AT 1/12 POINT (0.083L) | | | | | | | | | | | | |
| K _{AB} = 0.027 C _{AB} = 11,000 K _{BA} = 3,270 C _{BA} = 0.091 | | | | | | | | | | | | |
| POSITIVE MOMENTS (KIP-FEET) | | | | | | | | | | | | NEGATIVE MOMENTS (KIP-FEET) |
|  | | | | | | | | | | | |  |
| LOADING | MAXIMUM POSITIVE MOMENTS | | MOMENTS AT 0.3 POINT | | MOMENTS AT 0.8 POINT | | MAXIMUM NEGATIVE MOMENTS AT B | | MAXIMUM NEGATIVE MOMENTS AT A | | MAXIMUM NEGATIVE MOMENTS AT B | |
| LANE (L) | W: 0.64 k/ft. | W: 0.64 k/ft. | W: 0.64 k/ft. | W: 0.64 k/ft. | W: 0.64 k/ft. | W: 0.64 k/ft. | FEM | FEM | FEM | FEM | FEM | FEM |
| L | ft. | ft. | ft. | ft. | ft. | ft. | #A | #B | #A | #B | #A | #B |
| 180 | 164 | 86.2 | 3396L | 771L | 2706L | 2858L | 841L | 2516L | 1939T | 115T | 200T | 988T |
| 181 | 163 | 86.7 | 3429 | 779 | 2733 | 2886 | 849 | 2543 | 1951 | 115 | 2013 | 994 |
| 182 | 163 | 87.2 | 3463 | 787 | 2761 | 2914 | 858 | 2569 | 1962 | 115 | 2023 | 1000 |
| 183 | 162 | 87.7 | 3496 | 795 | 2788 | 2942 | 866 | 2595 | 1974 | 116 | 2034 | 1006 |
| 184 | 162 | 88.1 | 3530 | 803 | 2815 | 2971 | 875 | 2622 | 1985 | 116 | 2044 | 1012 |
| 185 | 161 | 88.6 | 3564 | 812 | 2843 | 2999 | 883 | 2649 | 1997 | 116 | 2055 | 1018 |
| 186 | 161 | 89.1 | 3598 | 820 | 2871 | 3028 | 892 | 2675 | 2008 | 117 | 2065 | 1024 |
| 187 | 160 | 89.6 | 3633 | 828 | 2907 | 3057 | 901 | 2702 | 2020 | 117 | 2075 | 1030 |
| 188 | 160 | 90.1 | 3667 | 836 | 2930 | 3086 | 909 | 2730 | 2031 | 118 | 2086 | 1036 |
| 189 | 159 | 90.5 | 3702 | 845 | 2955 | 3115 | 918 | 2757 | 2043 | 118 | 2096 | 1042 |
| 190 | 159 | 91.0 | 3736 | 853 | 2984 | 3144 | 927 | 2784 | 2054 | 118 | 2107 | 1048 |
| 191 | 158 | 91.5 | 3771 | 861 | 3013 | 3174 | 936 | 2812 | 2066 | 119 | 2117 | 1054 |
| 192 | 158 | 92.0 | 3806 | 870 | 3042 | 3203 | 944 | 2839 | 2077 | 119 | 2128 | 1060 |
| 193 | 157 | 92.4 | 3842 | 878 | 3070 | 3223 | 953 | 2867 | 2089 | 119 | 2138 | 1066 |
| 194 | 157 | 92.9 | 3877 | 887 | 3099 | 3262 | 962 | 2895 | 2100 | 120 | 2148 | 1072 |
| 195 | 156 | 93.4 | 3913 | 895 | 3129 | 3292 | 971 | 2923 | 2112 | 120 | 2159 | 1078 |
| 196 | 156 | 93.9 | 3948 | 904 | 3158 | 3322 | 980 | 2951 | 2124 | 120 | 2169 | 1083 |
| 197 | 155 | 94.4 | 3984 | 913 | 3187 | 3353 | 989 | 2980 | 2135 | 121 | 2180 | 1089 |
| 198 | 155 | 94.8 | 4020 | 921 | 3217 | 3383 | 998 | 3008 | 2147 | 121 | 2190 | 1095 |
| 199 | 154 | 95.3 | 4056 | 930 | 3246 | 3413 | 1007 | 3037 | 2158 | 122 | 2200 | 1101 |
| 200 | 154 | 95.8 | 4093 | 939 | 3275 | 3444 | 1017 | 3066 | 2170 | 122 | 2211 | 1107 |
| 201 | 153 | 96.3 | 4129 | 948 | 3306 | 3475 | 1026 | 3094 | 2181 | 122 | 2221 | 1113 |
| 202 | 153 | 96.8 | 4166 | 957 | 3336 | 3505 | 1035 | 3123 | 2193 | 123 | 2232 | 1119 |
| 203 | 152 | 97.2 | 4203 | 966 | 3365 | 3537 | 1044 | 3153 | 2204 | 123 | 2242 | 1125 |
| 204 | 152 | 97.7 | 4240 | 975 | 3397 | 3568 | 1054 | 3182 | 2216 | 123 | 2252 | 1131 |
| 205 | 152 | 98.2 | 4277 | 983 | 3427 | 3599 | 1063 | 3211 | 2227 | 124 | 2263 | 1137 |
| 206 | 151 | 98.7 | 4314 | 993 | 3458 | 3630 | 1073 | 3241 | 2239 | 124 | 2273 | 1143 |
| 207 | 151 | 99.2 | 4352 | 1,002 | 3489 | 3662 | 1082 | 3271 | 2250 | 124 | 2284 | 1149 |
| 208 | 150 | 99.6 | 4389 | 1,011 | 3519 | 3694 | 1091 | 3300 | 2262 | 125 | 2294 | 1155 |
| 209 | 150 | 100.1 | 4427L | 1,020L | 3550L | 3725L | 1101L | 3300L | 2273T | 125T | 2304T | 1161T |
| 210 | 150 | 100.5 | 4463L | 1,024L | 3584L | 3764L | 1104L | 3334L | 2294T | 126T | 2324T | 1165T |
| 211 | 150 | 101.0 | 4500L | 1,038L | 3613L | 3803L | 1108L | 3363L | 2314T | 127T | 2344T | 1169T |
| 212 | 150 | 101.5 | 4537L | 1,052L | 3642L | 3832L | 1112L | 3392L | 2334T | 128T | 2364T | 1173T |
| 213 | 150 | 102.0 | 4574L | 1,066L | 3671L | 3861L | 1116L | 3421L | 2354T | 129T | 2384T | 1177T |
| 214 | 150 | 102.5 | 4611L | 1,080L | 3700L | 3890L | 1120L | 3450L | 2374T | 130T | 2404T | 1181T |
| 215 | 150 | 103.0 | 4648L | 1,094L | 3729L | 3919L | 1124L | 3479L | 2394T | 131T | 2424T | 1185T |
| 216 | 150 | 103.5 | 4685L | 1,108L | 3758L | 3948L | 1128L | 3508L | 2414T | 132T | 2444T | 1189T |
| 217 | 150 | 104.0 | 4722L | 1,122L | 3787L | 3977L | 1132L | 3537L | 2434T | 133T | 2464T | 1193T |
| 218 | 150 | 104.5 | 4759L | 1,136L | 3816L | 4006L | 1136L | 3566L | 2454T | 134T | 2484T | 1197T |
| 219 | 150 | 105.0 | 4796L | 1,150L | 3845L | 4035L | 1140L | 3595L | 2474T | 135T | 2504T | 1201T |
| 220 | 150 | 105.5 | 4833L | 1,164L | 3874L | 4064L | 1144L | 3624L | 2494T | 136T | 2524T | 1205T |
| 221 | 150 | 106.0 | 4870L | 1,178L | 3903L | 4093L | 1148L | 3653L | 2514T | 137T | 2544T | 1209T |
| 222 | 150 | 106.5 | 4907L | 1,192L | 3932L | 4122L | 1152L | 3682L | 2534T | 138T | 2564T | 1213T |
| 223 | 150 | 107.0 | 4944L | 1,206L | 3961L | 4151L | 1156L | 3711L | 2554T | 139T | 2584T | 1217T |
| 224 | 150 | 107.5 | 4981L | 1,220L | 3990L | 4180L | 1160L | 3740L | 2574T | 140T | 2604T | 1221T |
| 225 | 150 | 108.0 | 5018L | 1,234L | 4019L | 4209L | 1164L | 3769L | 2594T | 141T | 2624T | 1225T |
| 226 | 150 | 108.5 | 5055L | 1,248L | 4048L | 4238L | 1168L | 3798L | 2614T | 142T | 2644T | 1229T |
| 227 | 150 | 109.0 | 5092L | 1,262L | 4077L | 4267L | 1172L | 3827L | 2634T | 143T | 2664T | 1233T |
| 228 | 150 | 109.5 | 5129L | 1,276L | 4106L | 4296L | 1176L | 3856L | 2654T | 144T | 2684T | 1237T |
| 229 | 150 | 110.0 | 5166L | 1,290L | 4135L | 4325L | 1180L | 3885L | 2674T | 145T | 2704T | 1241T |
| 230 | 150 | 110.5 | 5203L | 1,304L | 4164L | 4354L | 1184L | 3914L | 2694T | 146T | 2724T | 1245T |
| 231 | 150 | 111.0 | 5240L | 1,318L | 4203L | 4383L | 1188L | 3943L | 2714T | 147T | 2744T | 1249T |
| 232 | 150 | 111.5 | 5277L | 1,332L | 4242L | 4412L | 1192L | 3972L | 2734T | 148T | 2764T | 1253T |
| 233 | 150 | 112.0 | 5314L | 1,346L | 4281L | 4441L | 1196L | 4001L | 2754T | 149T | 2784T | 1257T |
| 234 | 150 | 112.5 | 5351L | 1,360L | 4320L | 4470L | 1200L | 4030L | 2774T | 150T | 2804T | 1261T |
| 235 | 150 | 113.0 | 5388L | 1,374L | 4359L | 4509L | 1204L | 4059L | 2794T | 151T | 2824T | 1265T |
| 236 | 150 | 113.5 | 5425L | 1,388L | 4398L | 4538L | 1208L | 4088L | 2814T | 152T | 2844T | 1269T |
| 237 | 150 | 114.0 | 5462L | 1,402L | 4437L | 4567L | 1212L | 4117L | 2834T | 1 | | |

TABLE OF MAXIMUM MOMENTS FOR PERMIT LOAD

Spans in Feet; Moments in FtK per lane at $\frac{C}{2}$ Span. Impact not included.

LOAD CONDITION

| SPAN | | P-5 | P-7 | P-9 | P-11 | P-13 |
|------|--|-------|---|-----|------|------|
| 1 | | 6.5 | | | | |
| 2 | | 13.0 | | | | |
| 3 | | 19.5 | | | | |
| 4 | | 26.0 | | | | |
| 5 | | 32.5 | | | | |
| 6 | | 39.0 | | | | |
| 7 | | 45.5 | | | | |
| 8 | | 52.0 | | | | |
| 9 | | 58.5 | | | | |
| 10 | | 66.0 | Note: Values given are based on groups of two 24 kip axles spaced 4'-6" apart. Values will not agree with computer programs that use groups of single 48 kip axles. | | | |
| 11 | | 78.0 | | | | |
| 12 | | 90.0 | | | | |
| 13 | | 102.0 | | | | |
| 14 | | 114.0 | | | | |
| 15 | | 126.0 | | | | |
| 16 | | 138.0 | | | | |
| 17 | | 150.0 | | | | |
| 18 | | 162.0 | | | | |
| 19 | | 174.0 | | | | |
| 20 | | 186.0 | | | | |
| 21 | | 198.0 | | | | |
| 22 | | 210.0 | | | | |
| 23 | | 222.0 | | | | |
| 24 | | 234.0 | | | | |
| 25 | | 246.0 | | | | |
| 26 | | 258.0 | | | | |
| 27 | | 270.1 | | | | |
| 28 | | 288.0 | | | | |
| 29 | | 306.0 | | | | |
| 30 | | 324.0 | | | | |
| 31 | | 342.0 | | | | |

TABLE OF MAXIMUM MOMENTS FOR PERMIT LOAD (Cont'd)

| SPAN | | P-5 | P-7 | P-9 | P-11 | P-13 |
|------|--|--------|--------|--------|------|------|
| 32 | | 360.0 | | | | |
| 33 | | 378.0 | | | | |
| 34 | | 396.0 | | | | |
| 35 | | 414.0 | | | | |
| 36 | | 432.0 | | | | |
| 37 | | 456.0 | 462.0 | | | |
| 38 | | 480.0 | 492.0 | | | |
| 39 | | 504.0 | 522.0 | | | |
| 40 | | 528.0 | 552.0 | | | |
| 41 | | 555.3 | 582.0 | | | |
| 42 | | 585.8 | 612.0 | | | |
| 43 | | 610.3 | 642.0 | | | |
| 44 | | 646.8 | 672.0 | | | |
| 45 | | 677.3 | 702.0 | | | |
| 46 | | 707.8 | 738.0 | | | |
| 47 | | 738.3 | 774.0 | | | |
| 48 | | 768.8 | 810.0 | | | |
| 49 | | 799.3 | 846.0 | | | |
| 50 | | 829.8 | 882.0 | | | |
| 51 | | 860.3 | 918.0 | | | |
| 52 | | 890.8 | 954.0 | | | |
| 53 | | 921.3 | 990.0 | | | |
| 54 | | 951.8 | 1026.0 | | | |
| 55 | | 982.3 | 1062.0 | | | |
| 56 | | 1012.8 | 1098.0 | | | |
| 57 | | 1043.3 | 1134.0 | | | |
| 58 | | 1073.8 | 1170.0 | | | |
| 59 | | 1104.3 | 1206.0 | | | |
| 60 | | 1134.8 | 1242.0 | | | |
| 61 | | 1165.3 | 1248.0 | | | |
| 62 | | 1195.8 | 1314.0 | | | |
| 63 | | 1226.3 | 1350.0 | | | |
| 64 | | 1256.8 | 1386.0 | 1392.0 | | |
| 65 | | 1287.3 | 1422.0 | 1434.0 | | |

TABLE OF MAXIMUM MOMENTS FOR PERMIT LOAD (Cont'd)

| SPAN | | P-5 | P-7 | P-9 | P-11 | P-13 |
|------|---|--------|--------|--------|--------|------|
| 66 | | 1317.8 | 1458.0 | 1476.0 | | |
| 67 | | 1348.3 | 1494.0 | 1518.0 | | |
| 68 | | 1378.8 | 1533.2 | 1560.0 | | |
| 69 | | 1409.3 | 1575.7 | 1602.0 | | |
| 70 | | 1439.8 | 1618.2 | 1644.0 | | |
| 71 | | 1470.3 | 1660.7 | 1686.0 | | |
| 72 | : | 1500.8 | 1703.2 | 1728.0 | | |
| 73 | | 1531.3 | 1745.7 | 1776.0 | 1782.0 | |
| 74 | | 1561.8 | 1788.2 | 1824.0 | 1836.0 | |
| 75 | | 1592.3 | 1830.7 | 1872.0 | 1890.0 | |
| 76 | | 1622.8 | 1873.2 | 1920.0 | 1944.0 | |
| 77 | | 1653.3 | 1915.7 | 1971.2 | 1998.0 | |
| 78 | | 1683.8 | 1958.2 | 2025.7 | 2052.0 | |
| 79 | | 1714.3 | 2000.7 | 2080.2 | 2106.0 | |
| 80 | | 1744.8 | 2043.2 | 2134.7 | 2160.0 | |
| 81 | | 1775.3 | 2085.7 | 2189.2 | 2214.0 | |
| 82 | | 1805.8 | 2128.2 | 2243.7 | 2274.0 | |
| 83 | | 1836.3 | 2170.7 | 2298.2 | 2334.0 | |
| 84 | | 1866.8 | 2213.2 | 2352.7 | 2394.0 | |
| 85 | | 1897.3 | 2255.7 | 2407.2 | 2454.0 | |
| 86 | | 1927.8 | 2298.2 | 2461.7 | 2514.0 | |
| 87 | | 1958.3 | 2340.7 | 2516.2 | 2574.0 | |
| 88 | | 1988.8 | 2383.2 | 2570.7 | 2634.0 | |
| 89 | | 2019.3 | 2425.7 | 2625.2 | 2694.0 | |
| 90 | | 2049.8 | 2468.2 | 2679.7 | 2754.0 | |
| 91 | | 2080.3 | 2510.7 | 2734.2 | 2814.0 | |
| 92 | | 2110.8 | 2553.2 | 2788.7 | 2874.0 | |
| 93 | | 2141.3 | 2595.7 | 2843.2 | 2934.0 | |
| 94 | | 2171.8 | 2638.2 | 2897.7 | 2994.0 | |
| 95 | | 2202.3 | 2680.7 | 2952.2 | 3054.0 | |
| 96 | | 2232.8 | 2723.2 | 3006.7 | 3114.0 | |
| 97 | | 2263.3 | 2765.7 | 3061.2 | 3174.0 | |
| 98 | | 2293.8 | 2808.2 | 3115.7 | 3164.9 | |
| 99 | | 2324.3 | 2850.7 | 3170.2 | 3294.0 | |

TABLE OF MAXIMUM MOMENTS FOR PERMIT LOAD (Cont'd)

| SPAN | | P-5 | P-7 | P-9 | P-11 | P-13 |
|------|--|--------|--------|--------|--------|--------|
| 100 | | 2354.8 | 2893.2 | 3224.7 | 3354.0 | 3360.1 |
| 101 | | 2385.3 | 2935.7 | 3279.2 | 3414.0 | 3426.1 |
| 102 | | 2415.8 | 2978.2 | 3333.7 | 3474.0 | 3492.1 |
| 103 | | 2446.3 | 3020.7 | 3388.2 | 3534.0 | 3558.1 |
| 104 | | 2476.8 | 3063.2 | 3442.7 | 3597.3 | 3624.1 |
| 105 | | 2507.3 | 3105.7 | 3497.2 | 3663.8 | 3690.1 |
| 106 | | 2537.8 | 3148.2 | 3551.7 | 3730.3 | 3756.1 |
| 107 | | 2568.3 | 3190.7 | 3606.2 | 3796.8 | 3822.1 |
| 108 | | 2598.8 | 3233.2 | 3660.7 | 3863.3 | 3888.0 |
| 109 | | 2629.3 | 3275.7 | 3715.2 | 3929.8 | 3960.0 |
| 110 | | 2659.3 | 3318.2 | 3769.7 | 3996.3 | 4032.0 |
| 111 | | 2690.3 | 3360.7 | 3824.2 | 4062.8 | 4104.0 |
| 112 | | 2720.8 | 3403.2 | 3878.7 | 4129.3 | 4176.0 |
| 113 | | 2751.2 | 3445.7 | 3933.2 | 4195.8 | 4251.2 |
| 114 | | 2781.8 | 3488.2 | 3987.7 | 4262.3 | 4329.7 |
| 115 | | 2812.3 | 3530.7 | 4042.2 | 4328.8 | 4408.2 |
| 116 | | 2842.8 | 3573.2 | 4096.7 | 4395.3 | 4486.7 |
| 117 | | 2873.3 | 3615.7 | 4151.2 | 4461.8 | 4565.2 |
| 118 | | 2903.8 | 3658.2 | 4205.7 | 4528.3 | 4643.7 |
| 119 | | 2934.3 | 3700.7 | 4260.2 | 4594.8 | 4722.2 |
| 120 | | 2964.8 | 3743.2 | 4314.7 | 4661.3 | 4800.7 |
| 121 | | 2995.3 | 3785.7 | 4369.2 | 4727.8 | 4879.2 |
| 122 | | 3025.8 | 3828.2 | 4423.7 | 4794.3 | 4957.7 |
| 123 | | 3056.3 | 3870.7 | 4478.2 | 4860.8 | 5036.2 |
| 124 | | 3086.8 | 3913.2 | 4532.7 | 4927.3 | 5114.7 |
| 125 | | 3117.3 | 3955.7 | 4587.2 | 4993.8 | 5193.2 |
| 126 | | 3147.8 | 3998.2 | 4641.7 | 5060.3 | 5271.7 |
| 127 | | 3178.3 | 4040.7 | 4696.2 | 5126.8 | 5350.2 |
| 128 | | 3208.8 | 4083.2 | 4750.7 | 5193.3 | 5428.7 |
| 129 | | 3239.3 | 4125.7 | 4805.2 | 5259.8 | 5507.2 |
| 130 | | 3269.8 | 4168.2 | 4859.7 | 5326.3 | 5585.7 |
| 131 | | 3300.3 | 4210.7 | 4914.2 | 5392.8 | 5664.2 |
| 132 | | 3330.8 | 4253.2 | 4968.7 | 5459.3 | 5742.7 |
| 133 | | 3361.3 | 4295.7 | 5023.2 | 5525.8 | 5821.2 |

TABLE OF MAXIMUM MOMENTS FOR PERMIT LOAD (Cont'd)

| SPAN | | P-5 | P-7 | P-9 | P-11 | P-13 |
|------|--|--------|--------|--------|--------|--------|
| 134 | | 3391.8 | 4338.2 | 5077.7 | 5592.3 | 5899.7 |
| 135 | | 3422.3 | 4380.7 | 5132.2 | 5658.8 | 5978.2 |
| 136 | | 3452.8 | 4423.2 | 5186.7 | 5725.3 | 6056.7 |
| 137 | | 3483.3 | 4465.7 | 5241.2 | 5791.8 | 6135.2 |
| 138 | | 3513.8 | 4508.2 | 5295.7 | 5858.3 | 6213.7 |
| 139 | | 3544.3 | 4550.7 | 5350.2 | 5924.8 | 6292.2 |
| 140 | | 3574.8 | 4593.2 | 5404.7 | 5991.3 | 6370.7 |
| 141 | | 3605.3 | 4635.7 | 5459.2 | 6057.8 | 6449.2 |
| 142 | | 3635.8 | 4678.2 | 5513.7 | 6124.3 | 6527.7 |
| 143 | | 3666.3 | 4720.7 | 5568.2 | 6190.8 | 6606.2 |
| 144 | | 3695.8 | 4763.2 | 5622.7 | 6257.3 | 6684.7 |
| 145 | | 3727.3 | 4805.7 | 5677.2 | 6323.8 | 6763.2 |
| 146 | | 3757.8 | 4848.2 | 5731.7 | 6390.3 | 6841.7 |
| 147 | | 3788.3 | 4890.7 | 5786.2 | 6456.8 | 6920.2 |
| 148 | | 3818.8 | 4933.2 | 5840.7 | 6523.3 | 6998.7 |
| 149 | | 3849.3 | 4975.7 | 5895.2 | 6589.8 | 7077.2 |
| 150 | | 3879.8 | 5018.2 | 5949.7 | 6656.3 | 7155.7 |
| 151 | | 3910.3 | 5060.7 | 6004.2 | 6722.8 | 7234.2 |
| 152 | | 3940.8 | 5103.2 | 6058.7 | 6789.3 | 7312.7 |
| 153 | | 3971.3 | 5145.7 | 6113.2 | 6855.8 | 7391.2 |
| 154 | | 4001.8 | 5188.2 | 6167.7 | 6922.3 | 7469.7 |
| 155 | | 4032.3 | 5230.7 | 6222.2 | 6988.8 | 7548.2 |
| 156 | | 4062.8 | 5273.2 | 6276.6 | 7055.3 | 7676.7 |
| 157 | | 4093.3 | 5315.7 | 6331.2 | 7121.8 | 7705.2 |
| 158 | | 4123.8 | 5358.2 | 6385.7 | 7188.3 | 7783.7 |
| 159 | | 4154.3 | 5400.7 | 6440.2 | 7254.8 | 7862.2 |
| 160 | | 4184.8 | 5443.2 | 6494.7 | 7321.3 | 7940.7 |
| 161 | | 4215.3 | 5485.7 | 6549.2 | 7387.8 | 8019.2 |
| 162 | | 4245.8 | 5528.2 | 6603.7 | 7454.3 | 8097.7 |
| 163 | | 4276.3 | 5570.7 | 6658.2 | 7520.8 | 8176.2 |
| 164 | | 4306.8 | 5613.2 | 6712.7 | 7587.3 | 8254.7 |
| 165 | | 4337.3 | 5655.7 | 6767.2 | 7653.8 | 8333.2 |
| 166 | | 4367.8 | 5698.2 | 6821.7 | 7720.3 | 8411.7 |
| 167 | | 4398.3 | 5740.7 | 6876.2 | 7786.8 | 8490.2 |

TABLE OF MAXIMUM MOMENTS FOR PERMIT LOAD (Cont'd)

| SPAN | | P-5 | P-7 | P-9 | P-11 | P-13 |
|------|--|--------|--------|--------|--------|---------|
| 168 | | 4428.8 | 5783.2 | 6930.7 | 7853.3 | 8568.7 |
| 169 | | 4459.3 | 5825.7 | 6985.2 | 7919.8 | 8647.2 |
| 170 | | 4489.8 | 5868.2 | 7039.7 | 7986.3 | 8725.7 |
| 171 | | 4520.3 | 5910.7 | 7094.2 | 8052.8 | 8804.2 |
| 172 | | 4550.8 | 5953.2 | 7148.7 | 8119.3 | 8882.7 |
| 173 | | 4581.3 | 5995.7 | 7203.2 | 8185.8 | 8961.2 |
| 174 | | 4611.8 | 6038.2 | 7257.7 | 8252.3 | 9039.7 |
| 175 | | 4642.3 | 6080.7 | 7312.2 | 8318.8 | 9118.2 |
| 176 | | 4672.8 | 6123.2 | 7366.7 | 8385.3 | 9196.7 |
| 177 | | 4703.3 | 6165.7 | 7421.2 | 8451.8 | 9275.2 |
| 178 | | 4733.8 | 6208.2 | 7475.7 | 8518.3 | 9353.8 |
| 179 | | 4764.3 | 6250.7 | 7530.2 | 8584.8 | 9432.2 |
| 180 | | 4794.8 | 6293.2 | 7584.7 | 8651.3 | 9510.7 |
| 181 | | 4825.3 | 6335.7 | 7639.2 | 8717.8 | 9589.2 |
| 182 | | 4855.8 | 6378.2 | 7693.7 | 8784.3 | 9667.7 |
| 183 | | 4886.3 | 6420.7 | 7748.2 | 8850.8 | 9746.2 |
| 184 | | 4916.8 | 6463.2 | 7802.7 | 8917.3 | 9824.7 |
| 185 | | 4947.3 | 6505.7 | 7857.2 | 8983.8 | 9903.2 |
| 186 | | 4977.8 | 6548.2 | 7911.7 | 9050.3 | 9981.7 |
| 187 | | 5008.3 | 6590.7 | 7966.2 | 9116.8 | 10060.2 |
| 188 | | 5038.8 | 6633.2 | 8020.7 | 9183.3 | 10138.7 |
| 189 | | 5069.3 | 6675.7 | 8075.2 | 9249.9 | 10217.2 |
| 190 | | 5099.8 | 6718.2 | 8129.7 | 9316.3 | 10295.7 |
| 191 | | 5130.3 | 6760.7 | 8184.2 | 9382.8 | 10374.2 |
| 192 | | 5160.8 | 6803.2 | 8238.7 | 9449.3 | 10452.7 |
| 193 | | 5191.3 | 6845.7 | 8293.2 | 9515.8 | 10531.2 |
| 194 | | 5221.8 | 6888.2 | 8347.7 | 9582.3 | 10609.7 |
| 195 | | 5252.3 | 6930.7 | 8402.2 | 9648.8 | 10688.2 |
| 196 | | 5282.8 | 6973.2 | 8456.7 | 9715.3 | 10766.7 |
| 197 | | 5313.3 | 7015.7 | 8511.2 | 9781.8 | 10845.2 |
| 198 | | 5343.8 | 7058.2 | 8565.7 | 9848.3 | 10923.7 |
| 199 | | 5374.3 | 7100.7 | 8620.2 | 9914.8 | 11002.2 |
| 200 | | 5404.8 | 7143.2 | 8674.7 | 9981.3 | 11080.7 |

CHART B
STEAM RAILROAD LOADING

MAXIMUM MOMENTS, SHEARS, AND REACTIONS FOR CLASS E-10 ENGINE LOADING
One Track of Two Rails

| Span in Feet | Maximum Moment in Foot-Kips | Maximum Shear in Kips | Maximum Floor-beam Reaction Kips | Equivalent Uniform Load | | | | Span in Feet | Shear | Maximum Floor-beam Reaction Kips | Shear | Reaction |
|--------------------|--------------------------------------|--------------------------------|---|-------------------------|-------|----------|--------|--------------------|-------|---|-------|----------|
| | | | | Moment | Shear | Reaction | Moment | | | | | |
| 7 | 21.9 | 12.6 | 15.1 | 3.57 | 3.67 | 2.16 | .48 | 256.7 | 39.2 | 86.0 | 1.62 | 1.87 |
| 7½ | 22.6 | 13.4 | 16.0 | 3.33 | 3.56 | 2.12 | .44 | 285.8 | 40.3 | 85.2 | 1.60 | 1.83 |
| 8 | 23.0 | 14.0 | 16.8 | 3.12 | 3.51 | 2.11 | .45 | 414.9 | 41.4 | 60.3 | 1.57 | 1.32 |
| 8½ | 23.5 | 15.3 | 18.2 | 2.76 | 3.29 | 2.02 | .48 | 443.8 | 42.4 | 62.4 | 1.54 | 1.31 |
| 9 | 24.1 | 16.2 | 19.2 | 2.50 | 3.25 | 1.92 | .50 | 475.6 | 43.5 | 64.3 | 1.52 | 1.29 |
| 10 | 24.9 | 17.0 | 21.0 | 2.35 | 3.09 | 1.90 | .52 | 507.6 | 44.6 | 66.7 | 1.50 | 1.27 |
| 11 | 25.4 | 17.7 | 22.3 | 2.23 | 2.95 | 1.84 | .54 | 540.5 | 45.6 | 69.0 | 1.48 | 1.25 |
| 12 | 26.0 | 18.3 | 24.6 | 2.15 | 2.81 | 1.80 | .56 | 576.1 | 46.5 | 71.4 | 1.47 | 1.23 |
| 13 | 27.5 | 18.3 | 26.1 | 2.15 | 2.68 | 1.85 | .58 | 611.6 | 47.7 | 74.0 | 1.45 | 1.21 |
| 14 | 28.6 | 18.8 | 27.3 | 2.12 | 2.55 | 1.82 | .60 | 649.6 | 48.8 | 76.6 | 1.44 | 1.20 |
| 15 | 29.6 | 20.0 | 27.3 | 2.12 | 2.37 | 1.82 | .60 | 649.6 | 48.8 | 76.6 | 1.44 | 1.20 |
| 16 | 30.0 | 21.3 | 29.5 | 2.19 | 2.64 | 1.73 | .62 | 688.2 | 50.0 | 80.1 | 1.43 | 1.20 |
| 17 | 30.5 | 22.4 | 30.4 | 2.15 | 2.63 | 1.73 | .64 | 727.7 | 51.1 | 81.5 | 1.42 | 1.20 |
| 18 | 31.0 | 23.3 | 30.3 | 2.10 | 2.59 | 1.69 | .66 | 769.7 | 52.5 | 83.9 | 1.41 | 1.19 |
| 19 | 31.3 | 24.3 | 31.5 | 2.07 | 2.55 | 1.65 | .68 | 811.7 | 53.5 | 86.8 | 1.40 | 1.18 |
| 20 | 31.1 | 25.0 | 32.8 | 2.05 | 2.50 | 1.64 | .70 | 853.7 | 55.2 | 88.5 | 1.39 | 1.18 |
| 21 | 31.9 | 26.7 | 34.0 | 2.05 | 2.45 | 1.63 | .72 | 896.7 | 56.7 | 90.7 | 1.38 | 1.17 |
| 22 | 32.3 | 26.5 | 35.1 | 2.03 | 2.40 | 1.60 | .74 | 939.0 | 58.1 | 92.0 | 1.37 | 1.16 |
| 23 | 32.7 | 27.0 | 36.1 | 2.01 | 2.34 | 1.57 | .76 | 986.0 | 59.6 | 93.6 | 1.36 | 1.15 |
| 24 | 34.2 | 27.7 | 37.0 | 1.98 | 2.31 | 1.54 | .78 | 1032.7 | 60.9 | 97.3 | 1.35 | 1.14 |
| 25 | 35.2 | 28.4 | 37.8 | 1.95 | 2.27 | 1.51 | .80 | 1080.0 | 62.1 | 99.4 | 1.35 | 1.14 |
| 26 | 36.2 | 29.1 | 38.8 | 1.92 | 2.34 | 1.49 | .82 | 1128.3 | 63.6 | 101.5 | 1.34 | 1.14 |
| 27 | 37.2 | 29.6 | 39.0 | 1.89 | 2.20 | 1.48 | .84 | 1177.7 | 64.8 | 103.5 | 1.34 | 1.14 |
| 28 | 38.2 | 30.3 | 41.2 | 1.85 | 2.16 | 1.47 | .86 | 1229.7 | 65.1 | 105.4 | 1.33 | 1.13 |
| 29 | 39.0 | 30.8 | 42.4 | 1.84 | 2.12 | 1.46 | .88 | 1282.0 | 67.4 | 107.3 | 1.32 | 1.12 |
| 30 | 39.8 | 31.5 | 43.1 | 1.83 | 2.10 | 1.44 | .90 | 1334.7 | 68.6 | 109.3 | 1.32 | 1.12 |
| 31 | 31.6 | 32.3 | 44.3 | 1.80 | 2.08 | 1.43 | .92 | 1385.3 | 69.9 | 111.2 | 1.31 | 1.11 |
| 32 | 33.7 | 33.9 | 46.5 | 1.75 | 2.03 | 1.42 | .94 | 1442.7 | 71.3 | 113.1 | 1.30 | 1.10 |
| 33 | 33.0 | 33.6 | 46.7 | 1.75 | 2.03 | 1.41 | .96 | 1497.3 | 72.4 | 115.0 | 1.30 | 1.10 |
| 34 | 35.0 | 34.1 | 47.8 | 1.73 | 2.00 | 1.40 | .98 | 1552.7 | 73.7 | 116.8 | 1.29 | 1.09 |
| 35 | 36.1 | 34.6 | 48.8 | 1.71 | 1.98 | 1.39 | 1.00 | 1609.7 | 75.0 | 118.6 | 1.29 | 1.09 |
| 36 | 37.4 | 35.3 | 49.8 | 1.69 | 1.96 | 1.38 | 1.02 | 1667.7 | 76.7 | 140.5 | 1.28 | 1.08 |
| 37 | 38.7 | 35.9 | 50.7 | 1.68 | 1.94 | 1.37 | 1.04 | 1831.0 | 103.7 | 162.7 | 1.27 | 1.07 |
| 38 | 39.0 | 36.5 | 51.8 | 1.66 | 1.92 | 1.36 | 1.06 | 1876.2 | 117.3 | 165.8 | 1.26 | 1.06 |
| 39 | 39.3 | 37.2 | 52.8 | 1.64 | 1.90 | 1.35 | 1.08 | 2000.0 | 120.6 | 170.5 | 1.25 | 1.05 |
| 40 | 39.8 | 37.7 | 54.0 | 1.64 | 1.88 | 1.35 | 1.09 | 2053.0 | 120.6 | 170.5 | 1.25 | 1.05 |

CHART C

STEAM RAILROAD LOADING

MOMENTS IN FOOT-KIPS FOR CLASS E-10 ENGINE LOADING

One Track or Two Rails

| Wheel Numbers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | | |
|--------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| Axle Loads | 5.0 | 10.0 | 10.0 | 10.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 10.0 | 10.0 | 10.0 | 6.5 | 6.5 | 6.5 | 6.5 | | | |
| Spacing in feet | ← 8 | → 5 | → 5 | → 5 | → 6 | → 6 | → 9 | → 5 | → 6 | → 5 | → 8 | → 8 | → 5 | → 5 | → 9 | → 5 | → 6 | | | |
| Totals from end of train | Kips | 142.0 | 137.0 | 117.0 | 97.0 | 90.5 | 84.0 | 77.5 | 71.0 | 65.0 | 55.0 | 45.0 | 35.0 | 26.0 | 19.5 | 13.0 | 6.5 | 0 | | |
| Feet | 109 | 101 | 96 | 91 | 86 | 77 | 72 | 66 | 61 | 53 | 45 | 40 | 35 | 30 | 21 | 16 | 10 | 0 | | |
| End of Train | \$182.0 | 7637.0 | 6627.0 | 5667.0 | 4767.0 | 3897.0 | 3396.5 | 2928.5 | 2499.5 | 2103.0 | 1838.0 | 1388.0 | 988.0 | 638.0 | 338.0 | 201.5 | 97.5 | 33.5 | | |
| 16 | 7472.0 | 6952.0 | 5992.0 | 5032.1 | 4232.0 | 3412.0 | 2944.0 | 2508.5 | 2112.0 | 1748.0 | 1508.0 | 1108.0 | 758.0 | 458.0 | 208.0 | 104.0 | 33.5 | | | |
| 17 | 6794.5 | 5299.5 | 5389.2 | 4529.5 | 3719.5 | 2959.5 | 2121.0 | 1767.0 | 1425.5 | 1110.5 | 860.5 | 640.5 | 310.5 | 110.5 | 39.0 | 19.0 | 33.5 | | | |
| 16 | 6020.5 | 5555.5 | 4705.5 | 3905.5 | 3155.5 | 2455.5 | 2059.0 | 1695.0 | 1370.0 | 1077.5 | 893.5 | 602.5 | 362.5 | 172.5 | 32.5 | 39.0 | 110.5 | | | |
| 15 | 5408.0 | 4958.0 | 4168.0 | 3418.0 | 2718.0 | 2068.0 | 1704.0 | 1372.5 | 1080.0 | 850.0 | 650.0 | 430.0 | 230.0 | 90.0 | 32.5 | 104.0 | 208.0 | | | |
| 14 | 4364.0 | 3569.0 | 3269.0 | 2599.0 | 1989.0 | 1429.0 | 1112.5 | 890.5 | 616.5 | 415.0 | 300.0 | 150.0 | 50.0 | 58.5 | 149.5 | 279.5 | 443.0 | | | |
| 13 | 3834.0 | 3464.0 | 2804.0 | 2194.0 | 1634.0 | 1124.0 | 851.0 | 610.5 | 409.0 | 240.0 | 150.0 | 50.0 | 50.0 | 141.0 | 264.5 | 487.0 | 632.0 | | | |
| 12 | 3354.0 | 2009.0 | 2399.0 | 1859.0 | 1329.0 | 869.0 | 628.5 | 420.5 | 251.5 | 115.0 | 50.0 | 50.0 | 160.0 | 273.5 | 429.5 | 634.5 | 853.0 | | | |
| 11 | 2924.0 | 2604.0 | 2044.0 | 1534.0 | 1074.0 | 664.0 | 456.0 | 320.5 | 144.0 | 40.0 | 80.0 | 150.0 | 300.0 | 456.0 | 644.5 | 872.0 | 1132.0 | | | |
| 10 | 2316.0 | 2036.0 | 1556.0 | 1126.0 | 746.0 | 416.0 | 260.0 | 136.5 | 62.0 | 30.0 | 210.0 | 390.0 | 620.0 | 825.0 | 1068.5 | 1348.0 | 1650.0 | | | |
| 9 | 1748.0 | 1508.0 | 1108.0 | 758.0 | 458.0 | 208.0 | 104.0 | 32.5 | 40.0 | 200.0 | 410.0 | 670.0 | 980.0 | 1240.0 | 1872.5 | 1854.0 | 2328.0 | | | |
| 8 | 1425.5 | 1210.5 | 860.5 | 550.5 | 310.5 | 110.5 | 39.0 | 32.5 | 97.5 | 307.5 | 567.5 | 877.5 | 1237.5 | 1530.0 | 1855.0 | 2119.0 | 2615.5 | | | |
| 7 | 1077.2 | 892.5 | 602.5 | 362.5 | 172.5 | 32.5 | 39.0 | 110.5 | 205.5 | 475.5 | 795.5 | 1165.5 | 1585.5 | 1917.0 | 2281.0 | 2654.0 | 3119.5 | | | |
| 6 | 820.0 | 660.0 | 420.0 | 230.0 | 90.0 | 32.5 | 104.0 | 208.0 | 328.0 | 648.0 | 1018.0 | 1438.0 | 1908.0 | 2272.0 | 2668.5 | 3104.0 | 3572.0 | | | |
| 5 | 415.0 | 300.0 | 150.0 | 60.0 | 55.5 | 149.5 | 279.5 | 442.0 | 607.0 | 1017.0 | 1477.0 | 1987.0 | 2547.0 | 2969.5 | 3434.5 | 3918.5 | 4465.0 | | | |
| 4 | 240.0 | 150.0 | 50.0 | 60.0 | 141.0 | 264.5 | 427.0 | 652.0 | 812.0 | 1272.0 | 1782.0 | 2342.0 | 2952.0 | 3407.0 | 3394.5 | 4421.0 | 4990.0 | | | |
| 3 | 115.0 | 80.0 | 50.0 | 150.0 | 273.5 | 429.5 | 624.5 | 852.0 | 1067.0 | 1577.0 | 2117.0 | 2747.0 | 3407.0 | 3894.5 | 4414.4 | 4973.5 | 5565.0 | | | |
| 2 | 40.0 | 50.0 | 150.0 | 300.0 | 456.0 | 644.5 | 872.0 | 1132.0 | 1378.0 | 1932.0 | 2442.0 | 3202.0 | 3918.0 | 4432.0 | 4984.5 | 5576.0 | 6200.0 | | | |
| 1 | 80.0 | 210.0 | 390.0 | 620.0 | 828.0 | 1058.5 | 1348.0 | 1660.0 | 1940.0 | 2580.0 | 3370.0 | 4010.0 | 4800.0 | 5378.0 | 5976.5 | 6630.0 | 7296.0 | | | |
| Totals from wheel No. 1 | Kips | 6.0 | 15.0 | 35.0 | 35.0 | 45.0 | 61.5 | 65.0 | 64.5 | 71.0 | 76.0 | 86.0 | 96.0 | 106.0 | 116.0 | 122.5 | 129.0 | 135.5 | 142.0 | 142.0 |
| Feet | 0 | 8 | 13 | 18 | 23 | 32 | 37 | 43 | 48 | 56 | 64 | 69 | 74 | 79 | 85 | 93 | 99 | 104 | 109 | |

Moments of wheel loads about

For E-40 loading multiply moments tabulated above by 4; for E-50 loading multiply by 5; for E-60 loading multiply by 6.